DOCTORAL THESIS

Homicide Solvability and Applied Victimology in New South Wales, 1994-2013

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HOMICIDE SOLVABILITY AND APPLIED VICTIMOLOGY IN NEW SOUTH WALES, 1994-2013

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Abstract

Extant research demonstrates that police investigators are traditionally offender-focused, in that the main aim of a police investigation is to bring the Person of Interest (POI) to justice. Within such a working environment, the victim is a source of evidence and often almost a secondary concern when considering their individual risk, their motivation and involvement in interaction prior to the crime perpetrated against them. In the past 25 years Australian police have been able to solve, on average, 88% of all reported homicides. This study was designed to discover factors that could potentially increase this percentage.

The main aim of this thesis was to discover if there were any solvability factors, related specifically to the victim, that could inform the investigators of 'why this victim, this time, this crime'. Once numerous solvability factors were identified via an extensive literature review, the second stage of the thesis statistically tested them for predictability, using categorical regression. When that testing was complete, the third and final stage of the research was completed to discover if there were any further solvability factors that could be identified, via reviewing 40 Briefs of Evidence (BoE), provided by the NSW State Crime Command Homicide Squad. This study is the first of its size in Australia and its results, although specific to New South Wales (NSW), could be extrapolated to the rest of the nation due to the socio-demographic range within NSW.

Combining all these tested and verified solvability factors created the Applied Victimology Matrix. This matrix is the outcome of this PhD research and

creates a much greater focus on the victim that goes beyond individual and psychological factors, and essentially is the process of identifying the victim's lifestyle, risk factors, specific personal traits, life goals and behaviour, and their direct impact or involvement on the crime that sees them harmed. Hence, it widens the parameters of the investigation to include more sociological factors of the victim's life to assist the police to manage the victim throughout the process of the investigation, identify lines of investigative enquiry, and create a more detailed Brief of Evidence (BoE). This is the first research of its kind and size using mixed-methodologies in Australia, and some of the findings contradict extant research and previous literature on homicide solvability.

I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any other university; and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

_____ 25 August 2015

Amber C. McKinley Dated

…For the murder police in the field, it is not only the body lying before them that has to be dealt with but also what they carry on their backs, which is the entire hierarchy of bosses who answer to bosses – the weight of bureaucratic self-preservation. Despite the over popularisation of CSI-style forensic advances, at times it must seem like the only reliable science for these investigators at the bottom of the food chain is the physics of careerism, which simply and reliably states that once a murder hits the papers or touches any kind of political nerve, the shit will always roll downhill. The best of them – those who more often than not, under great if superfluous pressure, *turn the red names on the board to black* – are left with an air of world-weariness and well-earned elitist pride (Richard Price, cited in Simon [2006], p. xiii).

Dedication

I wish to dedicate this thesis to the victims of homicide, those they have left behind, and to the police who pursue truth and justice on their behalf.

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This thesis has been made possible with the support of a number of individuals and organisations.

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Not unlike protecting the identity of victims and POIs in this research, I have also chosen to preserve the anonymity of the individual investigators featured in this

thesis. In saying that though, I would not, or in fact could not, submit this thesis without their continued assistance, patience and thoughtfulness. I wish to record my gratitude to the individual detectives who have continued to offer me assistance and inspiration over the years related to this thesis. Without their help, this research would not have been possible and I hope that you feel that I have done justice to your dedication, passion, and hard work. To you all, I wish you continued success and want to thank you for understanding, good humour and mostly, for your honesty, trust, and allowing me to review your work as part of my learning.

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If I have forgotten anyone, please forgive me it was not intentional.

Professional Editorial Assistance

Ms Patricia Corbett and Ms Rachel MacCulloch both provided professional editorial assistance throughout the entire process of completing this research. They assisted in correcting the referencing and table formats, and assisted in the consistency of expression, spelling and grammar for this thesis.

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Abbreviations and Acronyms

ABCI	Australian Bureau of Criminal Intelligence
ABS	Australian Bureau of Statistics
ACID	Australian Criminal Intelligence Database
ACT	Australian Capital Territory
ACWA	Association of Children's Welfare Agencies
AFP	Australian Federal Police
AIC	Australian Institute of Criminology
AKA	Also Known As
ALEIN	Australian Law Enforcement Intelligence Network (ABCI)
AVO	Apprehended Violence Order
BOCSAR	Bureau of Crime Statistics and Research
BOE	Brief of Evidence
BUHREC	Bond University Human Research Ethics Committee
CATCHEM	Centralised Analytical Team Collating Homicide Expertise Management (UK)
CCTV	Closed Circuit Television
CDRT	Child Death Review Team
CIA	Criminal Investigative Analysis
CJS	Criminal Justice System
CMG	Criminal Motorcycle Gang
COPS	Computerised Operational Policing System
CPEA	Child Protection Enforcement Agency (Crime Agencies NSW

	Police Service)
CSA	Child Support Agency
DAL	Division of Analytical Laboratories, NSW Department of Health
DNA	Deoxyribonucleic Acid
DO	Duty Officer (Represents Commander at Crime Scene as Part of First Response)
DOA	Dead on Arrival, or Deceased Person
DOI	Duty Operations Inspector
DPP	Director of Public Prosecutions
EDW	Enterprise Data Warehouse
ERISP	Electronically Recorded Interview with Suspect Person
FACS	NSW Department of Family and Community Services
FBI	Federal Bureau of Investigation (US)
FCA	Family Court of Australia
GLBT	Gay and Lesbian, Bisexual And Transgendered
HOLMES	Home Office Large Major Enquiry System (UK)
HRWG	Homicide Research Working Group
ID	Identification
ISRAPS	Interactive Scene Recording and Presentation System
JIRS	Joint Investigation Response Squad
LAC	Local Area Command
LD	Listening Device
MEOCS	Middle Eastern Organised Crime Squad

MO	Method of Operation aka Modus Operandi
MOU	Memorandum of Understanding
MPU	Missing Persons Unit
NCAVC	National Centre for the Analysis of Violent Crime
NCIS	National Coroners' Information System
NCPC	National Child Protection Clearinghouse
NCV	National Committee on Violence
NESB	Non-English Speaking Background
NHMP	National Homicide Monitoring Program
NSW	New South Wales
NSWCC	New South Wales Crime Commission
NSWPOL	New South Wales Police
NSWPREMS	New South Wales Premier's Department
NT	Northern Territory
OC	Organised Crime
OD	Overdose
ODPP	Office of The Director of Public Prosecutions
OIC	Officer in Charge
PACE	Passenger Analysis, Clearance And Evaluation Alerts
PERP	Perpetrator, Criminal or Offender
PIC	Police Integrity Commission
POI	Person of Interest
PORS	Public Order and Riot Squad
PSG	Protective Security Group (NSW Police)

QLD	Queensland
ROI	Record of Interview
S; SS	Section; Sections
SA	South Australia
SCC	State Crime Command
SEEB	State Electronic Evidence Branch
SES	State Emergency Service
SHR	Supplemental Homicide Reports
SIDS	Sudden Infant Death Syndrome
SITREP	Situation Report
SOG	Special Operations Group
SOP	Standard Operational Procedure
SPC	Sydney Police Centre, Goulburn Street, Darlinghurst
SPG	State Protection Group
SUDI	Sudden Unexpected Death of an Infant (up to 4 years)
SWAT	Special Weapons and Tactics
TAG	Tactical Assault Group
TAS	Tasmania
TI	Telephone Intercept
TIMS	Taskforce and Investigative Management System
TOU	Tactical Operations Unit
UCR	Uniform Crime Reports (US)
UK	United Kingdom
UN	United Nations

US	United States of America
VIC	Victoria
VICAP	Violent Criminal Apprehension Program
VICLAS	Violent Crimes Linkage Analysis System
WA	Western Australia

Glossary of Terms

For the purposes of this thesis, the following terms are defined as follows:

Applied Victimology	Extant research demonstrates that police investigators are traditionally offender-focused, in that the main aim of a police investigation is to bring the Person Of Interest (POI) to justice. Within such a working environment, the victim is a source of evidence and often almost a secondary concern when considering their individual risk, their motivation and involvement in interaction prior to the crime perpetrated against them. Applied victimology creates a much greater focus on the victim that goes beyond individual, psychological factors, and essentially is the process of identifying the victim's lifestyle, risk factors, specific personal traits, life goals and behaviour and their direct impact or involvement on the crime that sees them harmed. Hence, it widens the parameters of the investigation to include more sociological factors of the victim's life to assist the police to manage the victim throughout the process of the investigation, identify lines of investigative enquiry and create a detailed Brief of Evidence (BoE) that will potentially go to court.

Case	A homicide investigation assigned to a detective(s) for investigation. The terms incident, event, case and homicide are used interchangeably in this thesis.
Case Linkage	A method within investigation that endeavours to identify crimes that may have been perpetrated by the same Person of Interest (POI) due to similar behaviour noted at multiple crime scenes (Kocsis, 2007, p. 118). Also known as "comparative crime analysis" or "linkage analysis", it has been described as a type of behavioural analysis (Woodhams, Bull & Hollins, 2007).
Child Homicide	Death from another's deliberate actions of children aged less than 18 years, in contrast to infant homicide which refers to homicide of children aged less than 1 year. The NSW Child Death Review Team (CDRT) classifies child homicide as: ▪ Deaths arising from non-accidental injury ▪ Deaths caused by parents affected by mental illness ▪ Deaths arising from family breakdown ▪ Killings of teenagers ▪ Other recognised classifications include the categories of infanticide (usually defined as the killing of an infant by a

mentally ill mother), mercy killings, homicides associated with sexual assault, child homicide–suicide, child killings incidental to adult crimes, and the rare cases of children killing other children (Nielssen, Large, Westmore, & Lackersteen, 2009, p. 7).

Clearance Rates — The number of incidents cleared or partially cleared as a percentage of the total number of incidents. Strictly speaking, the NSW Police Force does not use the term "clearance rates" (Baldwin, personal communication, 2008). Within the database Computerised Operational Policing System (COPS), the clear-up status of an incident is given whereby each incident is classified according to one of the following categories:

- No further investigation
- Under investigation
- Partially cleared
- Cleared.

Therefore, a clearance rate may be derived as the number of incidents cleared or partially cleared as a percentage of the total number of incidents.

Cleared — Case status when police have arrested the Person of Interest

	(POI) or the homicide was otherwise solved; for example, the death of the offender in a murder-suicide. The terms "cleared", "closed" and "solved" are used interchangeably in this thesis.
Criminal Profiling	Initially used, along with "offender profiling" regularly by members of the FBI to describe the process of making inferences about an offender's characteristics from their actions at a crime scene and their interaction with victims (Canter, 1994; Petherick, 2003).
Criminology	The scientific study of crime and criminals.
Critical Incident - New South Wales	An incident involving a member of the NSW Police Force which resulted in the death of or serious injury to a person: ▪ Arising from the discharge of a firearm by the member ▪ Arising from the use of appointments or application of physical force by the member ▪ Arising from a police vehicle pursuit or from a collision involving a NSW Police Force vehicle ▪ In police custody ▪ Arising from a NSW Police Force operation or any other event, as deemed by a region commander, that could attract significant attention, interest or criticism from

	the community, and the circumstances are such that the public interest is best served through an investigation independent of the officers involved (NSW Police Force Intranet – *Critical Incident Guidelines*. Not publicly accessible).
Custody	The rights and responsibilities in Part 9 of Law Enforcement (Powers of Responsibility, NSW) (LEPRA) apply to both a person who is under arrest AND a person who is in the company of a police officer for the purpose of participating in an investigative procedure if the officer: ▪ Believes that there is sufficient evidence to establish that the person has committed an offence that is or is to be the subject of the investigation ▪ Would arrest the person if they attempted to leave; or ▪ Has given the person reasonable grounds for believing they would not be allowed to leave if they wished to do so. The officer is expected to reasonably foresee what might happen when certain signs and symptoms exist (NSW Police Force Intranet – *Code of Practice for Crime/Custody*. Not publicly accessible).
Extra-Legal Solvability Factors	Qualitative, often social as opposed to physical, factors about a person, including personality traits, family background and

	environment, and current lifestyle.
Filicide	The killing of a child by a parent. Within this definition there are several sub-categories, originally raised by Resnick (1969, as cited in Benitez-Borrego, Guardia-Olmos, & Aliaga-Moore, 2013, p. 2): ▪ Altruistic filicide – with associated post-crime suicide or to relieve suffering ▪ Filicide in the context of an acute psychotic episode ▪ Filicide because of an unwanted pregnancy ▪ Accidental filicide (caused by child abuse) ▪ Filicide due to spousal revenge.
Forensic Science	The application of scientific knowledge and methodology to legal issues and criminal investigations. Forensic science includes various fields of science, such as anthropology, biology, chemistry, pathology, phonetics, psychiatry, and toxicology. Physical evidence may be used in a court of law as part of the police's Brief of Evidence (BoE) against the Person(s) of Interest (POI; Saferstein, 2012).
Gig	Informant.
Homicide See Murder/	A person unlawfully killed. A homicide incident is an event in

Manslaughter

which one or more persons are killed at the same place and time. Due to the fact that homicide is defined separately in the criminal law of each Australian jurisdiction, the definition used in this thesis is taken from the National Homicide Monitoring Program (NHMP) Annual Report (Chan & Payne, 2013, p. 4) and reflects the operational definition used by police. The NHMP collects data on the following incidents:

- All cases resulting in a person or persons being charged with murder or manslaughter. This excludes driving-related fatalities, except those that immediately follow a criminal event such as armed robbery or motor vehicle theft
- All murder–suicides classed as murder by police
- All other deaths classed by police as homicides (including infanticides), whether or not an offender has been apprehended.

Excluded from this definition are attempted murder and violent deaths, not amounting to murder or manslaughter, such as industrial accidents involving criminal negligence (unless a charge of manslaughter is laid). Lawful homicide, including that by police in the course of their duties, is also

	excluded.
Homicide – Australian Bureau of Statistics	Murder, conspiracies and attempts to murder, manslaughter and driving causing death
Homicide – National Homicide Monitoring Program	Murder, manslaughter and infanticide.
Homicide – Canada	First-degree murder, second-degree murder, manslaughter or infanticide.
Homicide – England and Wales	Murder, manslaughter and infanticide.
Homicide – US	Murder and non-negligent manslaughter.
John/Jane Doe	Corpse – identity unknown.
Linkage Blindness	Inability of investigators to see beyond their own jurisdictional boundary, where their responsibility usually stops at a line on a map. A police department's accountability and responsiveness to its jurisdictional clients can create a sense of isolation from the outside world. The term "linkage blindness" was coined in 1984 to denote an underlying problem with law enforcement capabilities regarding serial murder investigations and serial sexual crimes (Egger, 1984,

	2002). See: Case Linkage.
Missing Persons	"...anyone who is reported missing to police, whose whereabouts are unknown, and there are fears for the safety or concern for the welfare of that person. This includes anyone missing from any institution, *excluding* escapees." (*NSW Police Force Missing Persons Policy*, p. 3; not publicly accessible).
Modus Operandi (MO) aka: Method of Operation	A distinct process, the way in which a Person Of Interest works, which may lead to the identification of a criminal; especially one that indicates the work of an individual in a series of crimes. For example, MO may include: victim type, how the POI targeted the victim, the choice of weapon, the time and place that the crime occurred (Salo, Sirén, Corander, Zappalà, Bosco, Mokros, & Santtila, 2013).
Murder/ Manslaughter	(1)(a) Murder shall be taken to have been committed where the act of the accused, or thing by him or her omitted to be done, causing the death charged, was done or omitted with reckless indifference to human life, or with intent to kill or inflict grievous bodily harm upon some person, or done in an attempt to commit, or during or immediately after the

commission, by the accused, or some accomplice with him or her, of a crime punishable by imprisonment for life or for 25 years.

(1)(b) Every other punishable homicide shall be taken to be manslaughter.

(2)(a) No act or omission which was not malicious, or for which the accused had lawful cause or excuse, shall be within this section.

(2)(b) No punishment or forfeiture shall be incurred by any person who kills another by misfortune only.

(Crimes Act 1900 (NSW), s18 [correct as at 13 June 2014]).

Person of Interest (POI)	Used by NSW Police during their homicide investigations to identify an individual that they consider pertinent to solving the crime. They use POI instead of other terms such as: ▪ Offender (only used when the individual has been found guilty by a court) ▪ Suspect (considered an emotive term) ▪ Perpetrator, also an emotive term, which may assume guilt when used prior to trial.
Precautionary Acts	"…behaviours that offenders commit before, during or after

	an offence that are consciously intended to confuse, hamper, or defeat investigative or forensic efforts for the purposes of concealing their identity, their connection to the crime, or the crime itself" (Turvey, 2008, p. 212). This concept is similar to, or part of, crime concealment or crime scene staging.
Signature Behaviours	Signature behaviours are actions that are not necessary to commit the offence, but that the offender has to do to satisfy their psychological needs; they are unique to each individual POI (Crabbé, Decoene, & Vertommen, 2008, p. 18).
Solvability Factors	Clues or information found at a crime scene which assist in bringing the case to a successful conclusion (Geberth, 1996b; Wellford & Cronin, 1999).
Solved	Recorded by police when a homicide is cleared by arrest. Solved incidents include those for which a POI has been identified and charged, those in which the POI has committed suicide, and incidents otherwise cleared, such as subsequent death of the POI, the death having been ruled not homicide (Mouzos & Muller, 2001). See: Clearance Rates.
Staged Crime Scene	"A staged crime scene is the physical manifestation of deception. It involves the deliberate alteration of the physical

	evidence by the offender to simulate events or offences that did not occur for the purpose of misleading authorities or redirecting the investigation." (Ferguson, 2010, p. ii).
Sudden Unexpected Death in Infancy (SUDI)	A general definition for "all infant deaths which are sudden and unexpected, not just those attributed to SIDS" (Byard, 2010, p. 21). SUDI is the "umbrella term" (Byard, 2010, p. 24) used "at the point of presentation to encompass all unexpected infant deaths", whereas following any investigation, a division will be made into "those where a specific cause of death is established (explained SUDI) and those which remain unexplained (SIDS)" (Sidebotham, 2010, p. 13).
Unsolved	Used by NSW Police when the case is cleared as 'inactive', when an investigation has produced insufficient evidence to charge an offender(s) and all leads have been exhausted. An unsolved homicide is a homicide for which the offender(s) has not been convicted. The offence must have occurred more than three years prior to the time of review. Cases in which an accused was acquitted on the grounds of self-defence or mental illness are considered solved. In such

	cases, the identity of the person committing the homicide is known; however, no prosecution can be launched. Cases in which the suspect is deceased can be reviewed and where a coroner finds that the homicide was committed by a person now deceased, the matter is considered solved. Missing persons cases are included as unsolved homicides unless there is an open finding by a coroner. (As defined on NSW Police intranet; not publicly accessible).
Victimology	The study of crime victims and the psychological effects of being a victim (Karmen, 2012).

Aims of Thesis

There were three aims in this thesis. The first was to discover if there were any extralegal or evidentiary solvability factors related specifically to the victim that could inform the investigators 'why this victim, this time, this crime'. Once numerous solvability factors were identified via an extensive literature review, the second aim of the thesis was to statistically test them for predictability. When that testing was completed, the third and final aim of the research was to discover if there were any further solvability factors that could be identified via reviewing 40 Briefs of Evidence (BoE), provided by the NSW State Crime Command Homicide Squad.

These solvability factors would be combined to create the *Applied Victimology Matrix* in order to better inform investigation practice and procedures, analytical methods, and demographics of the population served in an evidence-based model. This matrix which is the outcome of this PhD research creates a much greater focus on the victim that goes beyond individual psychological factors, and essentially is the process of identifying the victim's lifestyle, risk factors, specific personal traits, life goals and behaviour, and their direct impact or involvement on the crime that led to their death. Hence, it widens the parameters of the police investigation to include more sociological factors of the victim's life to assist the police to 'manage' the victim throughout the process of the investigation, identify lines of investigative enquiry that might otherwise have been missed or overlooked and create a more detailed Brief of Evidence (BoE) that has a better chance of judicial examination and therefore would be classified within police records as 'cleared'.

Chapter 1: Introduction

Murder cases regularly feature as front-page news and there is an expectation that the police will solve these homicides and bring the Person of Interest (POI) to justice thereby not only keeping the public safe but giving "*just desserts*" to the POI. This expectation is reinforced by a culture of popular entertainment: nightly, one can tune into a variety of police, legal and forensic television dramas where the killer is almost always identified and brought to justice using seemingly unlimited resources. The "*cops and robbers*" genre in films where the police always triumph; and popular fiction spanning from children's entertainment in Banana's in Pyjamas and Scooby-Doo to the teenage detective in Veronica Mars, continuing onto the adult realm of Sir Arthur Conan Doyle, Agatha Christie, and Stuart McBride, where the main character(s) almost always solve the crime.

The reality for police is that not all crimes are solved. The data analysed during this thesis identified that nationally, 12% of all homicides in Australia remain unsolved, raising questions about police performance. Despite the exigent and complex realities relating to the prevalence of Australian homicide events, this thesis is the first empirical study of the specific characteristics, variables, and solvability factors related to criminal homicide events of its size and type that may lead to more cases being solved, therefore resulting in higher clearance rates.

Homicide clearance rates have been the topic of news articles and academic journals due to the fact that clearance rates are viewed as the police report card. This has been informed, and some would say skewed, by the impact of the Hollywood

fictional murder genre. This genre engenders increased public expectation for complete success in solving homicides. This issue is so important and influential that academia has created specific terminology, for example, the "CSI Effect". This research has shown that the public is so affected by what they see on television and read in books that they have a distorted and idealistic view of what to expect from many parts of the criminal justice system, in particular police investigative techniques and forensic evidence.

From a policing perspective, the CSI Effect is frustrating and creates unrealistic expectations that police need to manage throughout their investigations. The bulk of police work on a homicide crime scene is to identify factors, predominantly through the collection of forensic and other technical evidence and witness statements, that increase the chance of solving the crime and to use these factors to open lines of enquiry to identify the POI. The Officer in Charge (OIC) of the investigation expects their team to identify the POI within the first 48 hours, and where this does not occur, the chances of clearing the crime are drastically reduced (Kelchner & Kolnes, 2008). Since the data show that the majority of perpetrators of homicide are male (Chan & Payne, 2013), in this thesis the Person of Interest will be referred to generically as "he".

Statement of the Problem

Two main research questions of this thesis were:

1. What are the key extra-legal and evidentiary solvability factors that are most predictive for solving homicide cases?

2. Are there any solvability factors, specific to the victim that are not previously identified in extant literature or frequently recorded by police that could assist with solving a homicide and therefore increase homicide clearance rates?

To ensure the integrity of the data for the thesis, specific criteria were established for data collection for consistency and comparability. The threshold for inclusion was set so that every case within this thesis must have:

- Involved a *proven* homicide (i.e., a body or head was found)
- Occurred within the state jurisdictional boundaries of NSW
- Been assigned to NSW State Crime Homicide Squad detectives between January 1, 1994 and April 30, 2013.

Background to This Research

There is considerable concern about homicide in society, but little attention given to how the police solve these cases. Research conducted through the National Homicide Monitoring Program (NHMP) indicates that the percentage of Australian homicides that remain unsolved have been stable at around 12% over the past 20 years (Chan & Payne, 2013). Yet in the US, a number of researchers concur that over the same time period, there has been a considerable decline in homicide clearance rates. However, there appears to be a significant divide between what researchers try to achieve and what practitioners know to be true from experience. Fyfe, Greene, Walsh, Wilson, and McLaren (1997, p. 188) posit that:

> Communications between researchers and practitioners sometimes fail for reasons that have nothing to do with hidden agendas. Many practitioners place great stock in Mark Twain's advice that "there are lies, damned lies, and

> statistics". Almost reflexively, such practitioners reject as sophistry much quantitative research. Conversely, many police researchers appear fixated on methodological sophistication and purity, without regard to whether their work addresses meaningful questions or can be interpreted by those who must attempt to put it into practice.

Data were collected for NSW from the NHMP and NSW Police during July 2008 to November 2009, and included cases from 1994 to 2005[1]. The state of NSW (as opposed to the whole of Australia) was selected for three reasons. First, NSW has both a large urban and rural population, making it suitable to use as demographically representative of most Australian jurisdictions. Second, as illustrated in Table 1, this state offered a larger dataset for research because NSW has the largest population of homicide victims in Australia (Chan & Payne, 2013). Third, NSW has one of the lowest homicide clearance rates in the country, as shown in Table 1 (ACT being the lowest at .1% below that of NSW).

For the period 1994-1995 to 2004-2005[2], 3,357 homicide incidents were recorded in Australia by the NHMP, with 4,177 victims. Of these incidents, 396 homicides (11.5%) were recorded as unsolved, making the national clearance rate for homicide 88.2%. During the same period, NSW recorded 1 094 incidents of homicide, of which 905 were solved and 189 remained unsolved, thus making the clearance rate for this period 82.7 (see Table 1).

[1] After the initial data collection from the NHMP, data continued to be collected on NSW homicides from the State Crime Homicide Squad up until 31 April 2013.
[2] For research on POI, data collection from the NHMP (AIC) was conducted in 2007, with case studies limited to a timeline of 1994-1995 to 2004-2005 as the most complete data sets. These data are collated based on Australian financial years beginning 1 July.

Table 1

Homicide Incidents 1994-1995 to 2004-2005 by Status of Investigation and Jurisdiction (Number and Proportion)

Jurisdiction	Solved*		Unsolved		Total[3]
	n	%	*n*	%	*N*
NSW	905	82.7	189	17.3	1094
VIC	555	85.6	93	14.4	648
QLD	656	92.4	54	7.6	710
WA	335	93.3	24	6.7	359
SA	250	91.2	24	8.8	274
TAS	67	95.7	3	4.3	70
ACT	19	82.6	4	17.4	23
NT	172	97.2	5	2.8	177
NI†	2	100.0	0	0.0	2
Total	2,961	88.2	396	11.8	3,357

To investigate and successfully clear a case, homicide investigators use basic principles of who, what, where, when, and why to form a picture of who did what to whom, where, when it happened, and how the homicide was carried out. These principles are seen best in a well-known poem by Kipling (1912):

> I keep six honest serving-men
> (They taught me all I knew);
> Their names are What and Why and When
> And How and Where and Who.
> I send them over land and sea,
> I send them east and west;
> But after they have worked for me,
> *I* give them all a rest. (p. 83)

[3] Solved incidents include those for which an offender has been identified and charged, those in which the offender has committed suicide and incidents otherwise cleared, such as subsequent death of the offender, the death having been ruled not homicide.

†NI in this table refers to Norfolk Island.

Source: AIC NHMP 1994-05 to 2004-05 [computer file].

The principles in Kipling's poem, although written over a century ago, still hold true today. During the process of investigating, police trawl through the details of the victim's life, create timelines indicating events prior to the victim's death, and collect evidence and information about the most probable POI. However, identifying the POI does not mean that the crime is solved. Police must have sufficient physical evidence linking the POI to the victim (*who*), weapon (*how*) and the crime scene (*where* and *what*) at the time the crime was committed (*when*); otherwise, the case can remain unsolved. The *why* factor assists police in unravelling events leading up to the homicide, but establishment of motive is not required by law in NSW to prove intent (personal communication with a Detective Inspector, July 28, 2008).

Decline in Homicide Rates

The value of reviewing solvability factors fits into a context of overall decline in the incidence of homicide. The United Nations Office on Drugs and Crime (UNODC) has recently released a report demonstrating a global decline in homicide events (UNODC, 2011). Data were collected from 88 regions including the United States, Asia, Europe, and Oceania from 2003 to 2008, and were obtained both from criminal justice and medical health sources[4]. The following graph (Figure 1) illustrates the decline in homicide incidents in Australia since recording began in the National Homicide Monitoring Program (NHMP) within the Australian Institute of Criminology (AIC).

[4] There were exceptions, including some Caribbean and Central–South American countries that, during this same time, experienced "significant" increases in their homicide rates (Morrell, Hazelton, & Shackleton, 2013). Researchers believe this phenomenon is caused by an increase in organised trans-national crime, including human trafficking, drugs and gang-related crime (UNODC, 2011).

The overall decrease in homicide numbers for Australia follows a similar international trend over recent years (see Figure 1). The most current data indicate that although there have been annual variations, the rate of homicide events has decreased since 1989 when NHMP started recording (Chan & Payne, 2013). The annual rate per 100,000, homicide incidents decreased from 1.9 in 1990–1991 to 1.2 in 2007–2008, while the percentage of clearance rates was stable at 88%.

Figure 1. Homicide incidents in Australia 1989-1990 to 2009-2010 (AIC, 2013).

Whilst there is currently no direct evidence to indicate one or more specific reasons for the decline in Australian homicides, the link to directed specific and serious crime prevention and reduction policing activities may reveal an advanced and inventive approach to the decline in homicide numbers, including:

- Anti-violence campaigns, such as "Violence against Women: Australia says NO"

  Alcohol-free zones in public roadways

- Club and hotel curfews, lock-outs after a certain hour
- Co-ordinated multi-agency interventions in cases of domestic violence
- Advances in training, equipment and lifesaving drugs, allowing victims' lives to be saved, where they may previously have died from their injuries. The consequence is a shift of the offence from homicide to another offence category, such as Grievous Bodily Harm (GBH)
- Criminal justice policy changes where heavier penalties apply to breaches of licensing laws, diversion programs for POIs affected by alcohol and illicit substances, and monitoring by police of *known problematic* premises
- Effective dissemination of information about risk factors to key agencies
- Injury reduction programs, such as use of plastic cups in public houses, banning of bottle-served alcohol, and weapons searches on entry to public houses or dance clubs
- Policies relating to the identification of risk factors for serious domestic violence
- An acknowledgment of, and dedication to, intelligence-led policing from NSW State Crime Command (SCC) Police specialty squads, such as the Middle Eastern Organised Crime Squad (MEOCS), Robbery Crime Squad (RCS) and the Property Crime Squad (PCS), targeting specific crime areas and understanding specific crime nuances, proactively policing and stopping homicides before they occur
- Overt crime-prevention strategies, such as Closed Circuit Television (CCTV) coverage in problem areas.

Notwithstanding the decline in homicides, and despite the efforts of the police to affect a swift and just resolution, there are always some offences that for a variety of reasons are not solved, sometimes for years, if at all. As stated previously, unsolved homicides are likely to undermine confidence in the police and the knowledge that a murderer is still at large will increase fear of crime in the community. With this in mind, NSW police maintain a dedicated Unsolved Homicide Squad to focus resources on these difficult cases to satisfy the public's expectation of justice served, to deter possible crimes occurring in the future, and to bring the POI to account for their actions.

Variations in the Calculation of Homicide Rates

A challenge in research is obtaining useful data that is sufficiently complete to allow proper analysis. The lack of detail in police data, especially for unsolved homicides, has posed problems for earlier research in this field (Riedel & Jarvis, 1998; Riedel & Rinehart, 1996). After the Hoddle Street (Haddow, 1998) and Queen Street (Willcox, 1987) massacres in Victoria, both of which occurred in 1987, several researchers, academics, senior police officers, and government officials assembled in 1989 to debate issues related to the measurement, investigation and perception of violence and homicide incidents. They agreed to form a National Committee on Violence (NCV) and Recommendation 103 was the creation of a homicide monitoring program to inform stakeholders and the public about trends and issues over time.

The National Homicide Monitoring Program (NHMP) was created pursuant to this recommendation from the NCV. When creating the guidelines for the program, the NCV established a standard method for calculating homicide rates. In structuring its report, entitled *Violence: Directions for Australia* (1990), the NCV agreed that the best way to facilitate implementation of its recommendations was to set out the proposals that were the responsibility of public sector agencies according to areas of portfolio responsibility. However, because of the importance the NCV attached to the need for high quality and reliable information relating to the incidence and epidemiology of violence, the NCV devoted a specific chapter to recommendations relating to information gathering and storage, and research agencies. Here it referred specifically to the role and responsibilities of the Australian Institute of Criminology (AIC). Whilst this body of work was focused on the *prevention* of violent crime and homicide, there was very limited research carried out on identifying solvability factors for offences that had been committed (Mouzos & Muller, 2001).

Wellford and Cronin (1999) reported that law enforcement agencies proportionally spent a lot of time and effort endeavouring to increase their homicide clearance rates. Researchers have also devoted considerable time; attention and rigour to better understand homicide clearance rates, factors that influence them, and variables that directly relate to them. It is this researcher's contention that these divergent approaches have led to a body of knowledge that is split by virtue of capacity, access, and experience. Investigators rely on their training, experience,

professionalism and "gut instinct" to foster, change, and explain their assumptions and opinions with regard to influential solvability factors which are not typically validated by research. In contrast, academic research is systematic, has rigour and validity, but is generally theoretically based and not applicable nor sufficiently practical to assist police in improving homicide clearance rates.

In this thesis, the Applied Victimology Matrix will be created and the principles surrounding it introduced. With regard to practice, police traditionally are offender-focused, in that the main aim of the police as part of the criminal justice system is to bring the perpetrator to justice. Within such a working environment, the victim is almost a secondary concern in regards to their own risk, motivation, and involvement in the crime against them. After reviewing the 150 unsolved cases provided by the NHMP data, this researcher formed the hypothesis that a greater focus on the victim, who represents a significant part of the crime, could be a major contributing factor to solving more homicides.

Theoretically, the term "Applied Victimology" signals a clear shift away from the existing, often psychologist-based approaches to solving homicide, usually referred to as criminal profiling. Police tend to be inherently suspicious of psychologists[5] who make suggestions as to the possible characteristics of a POI, based on police knowledge about motivations that drive human behaviour in general. Criminal profiling has been labelled as "scart" referring to the blend of science and art, which is how their contribution may be viewed (Souryal, 1974). Moreover, such opinions are rarely accepted as evidence in court because it is not

[5] Must be a registered Forensic Psychologist in NSW.

accepted as sufficiently scientific, as well as often, because the "profile" is considered to be unfairly biased, against the POI, in nature (Bosco, Zappala, & Santtila, 2010).

In 2009, Turvey and Petherick coauthored a text entitled *Forensic Victimology*, which illustrated the "scientific study of victims for the purposes of addressing investigative and forensic issues" (p. xxxii). Forensic victimology was formulated to address the lack of attention paid to the victims of crime, and to introduce students to the sub-discipline of victimology in a court environment. It serves criminal investigation by anticipating courtroom testimony. Criminology predominantly focuses on explanations for criminal behaviour and the operations of the criminal justice system, often at the expense of ignoring the victims' needs. Fattah (1979, p. 183) stated that the "study of victims and victimization has the potential of reshaping the entire discipline of criminology".

Turvey (2008, p 2) had previously noted that victims of violent crime were frequently studied as a "stereotypical group rather than as complex individuals". Forensic victimology scientifically studied the victims themselves within the legal context. Turvey and Petherick (2009) discussed the political and cultural influence on investigators when they were pressured to accept victim statements without question, in case they offended the complainant. They argued that the result is "less informed research, less informed investigations and less informed legal outcomes" (Turvey & Petherick, 2009, p. 30). For the purposes of forensic victimology, victimity must be established unequivocally and may not be asserted simply for ideological purposes. In the current victim-focused culture, the way that victims are studied is

difficult to address without offending someone – whether it be the victim, a victim's advocate, an investigator, an attorney, or a judge (Turvey & Petherick, 2009).

There are a number of significant differences between forensic victimology and applied victimology. Firstly, applied victimology is based specifically upon the review of 3,899 homicide cases from the NSW Police Force (1994-2013) and then a statistical review of 300 of said cases (150 solved and 150 unsolved). Secondly, applied victimology goes beyond individual, psychological factors, essentially being the process of identifying the victim's lifestyle, risk factors, specific personal traits, life goals, and behaviour. Hence, it widens the parameters to include more sociological factors of the victim's life. These victim-variables create a more complete picture of the interactions leading up to the homicide event; for example, although in most cases the perpetrator determined the time, place, and circumstances under which the victim died because they had control over these factors, factors of the victim's lifestyle and patterns of behaviour could also have contributed.

Forensic victimology takes the court process into consideration, including how the victim appears and is treated with the court procedures. This is another difference between applied victimology and forensic victimology, as applied victimology is used at both the investigative stage to build on the police Brief of Evidence (BoE) or in the review of an unsolved brief or case. After an in-depth and critical analysis of the victim, police should then turn their attention to the POI. Police should assess the level of risk the offender was willing to accept to commit the

crime because it could tell them something of the personality traits and needs of that individual. Using a written formula to explain:

- The crime scene (CS) equals the POI plus victim (V) or **CS=POI+V**

Therefore to determine the POI, one must consider:

- The POI equals the crime scene **minus** the victim or **POI=CS-V**

So theoretically, once the victim's impact is subtracted from the scene, the behavioural evidence that remains can logically be attributed to the POI, making it more likely that police will identify relevant POI traits as additional solvability factors. For this thesis, solvability factors are defined as information found at a crime scene that assist in bringing the case to a successful conclusion.

The applied victimology presented in this thesis aims to provide police with a matrix which reflects existing working practices but at the same time *broadens and deepens* the range of variables taken into account as relevant and useable in increasing the probability of solving and clearing a homicide case. Adding to current evidentiary factors, victimology literature (Doerner & Lab, 2011; Karmen, 2012; Prakash, 2006; Wolbert Burgess, Regehr, & Roberts, 2011) has been consulted to expand the possible range of relevant factors. The literature categorises homicide as either intimate, acquaintance, or stranger, based on the relationship between the POI and the victim (Chan & Payne, 2013). No matter which category is investigated, they all fit into four distinct *spheres*. Each of these spheres (POI, Homicide Event, Police, and Victim) has a direct impact on whether the crime is solved, because all four spheres have to interact in order to allow the police to proceed to prosecution. For

example, without a known POI, police cannot solve the crime; or without information about, or access to, the homicide event – the actual scene of the crime, physical evidence and the deceased victim – police can rarely proceed effectively; or if the POI is forensically aware and takes precautions, the likelihood of them leaving evidence for police to collect, analyse and link them to the crime is seriously reduced.

Figure 2. Nexus of case solvability.

The focus of the matrix proposed in this thesis is the *middle of the nexus*, taking into account all four spheres, but with the added insight of attempting to determine the relative impact of each on the individual cases' solvability. The relationship between the spheres is depicted in Figure 2. The key reason for studying the specific elements, both individually and in combination, is that for police to achieve the best possible clearance rates, the contributing variance of all spheres must be recognised and understood; because, as previously stated, if one of the spheres is missing or

partially missing, it reduces the ability of the police to solve and close the case. This type of nexus research, taking these four variables into account, and basing it on both primary and secondary datasets of this size, has never previously been undertaken in Australia.

The highlighted area at the centre of Figure 2 is the individual homicide case: the dependent variable. The four spheres are the independent variables, impacting on the possible solvability of the case, individually and in complex combinations. This research explores the possible significance of each independent variable on the dependent variable. These factors, or independent variables, have been further categorised into extra-legal and evidentiary solvability factors. All four spheres are represented in both categories; for example, victim variables can be categorised as either extra-legal or evidentiary. The superimposition of the two categories on top of the case nexus allows for a more nuanced yet encompassing approach, both theoretically and practically. In the first instance, this allows for a more sophisticated analysis of data and discussion of results, which secondly, allows for a more practical and therefore applicable matrix for homicide investigations.

Research Questions

The research questions for this thesis were developed and presented within each chapter following multiple literature reviews which identified four distinct areas thought to affect homicide case clearances. These areas are:

1. Police - their resources, investigative processes and practices
2. Victims

3. Person(s) of Interest (POI), and:
4. Homicide Event/Crime Scene

A question, directly related to the main aims of this thesis was developed in relation to each of the specific areas of interest, listed above. These questions are:

- Police: How do police perceive their ability, capacity, management, and culture in relation to clearing homicides?
- Victims: Are there any solvability factors, specific to the victim and not yet identified or frequently being recorded by police, that could assist with solving a homicide and therefore increase homicide clearance rates?
- Person(s) of Interest (POI)/perpetrator: To investigate extra-legal and evidentiary homicide solvability factors, through National Homicide Monitoring Program (NHMP) data and identify key variables that are statistically significant to solving homicides
- Homicide Event/Crime Scene: To explore the aetiology of homicide and the critical importance of the crime scene location and the homicide event and how they contribute as solvability factors.

Structure

This thesis articulates an innovative, evidence-based matrix, which demonstrates the four major thematic spheres of identifiable solvability factors within homicide (see Figure 2). Application of this matrix has been demonstrated to directly and positively affect homicide clearance rates when, as part of this thesis research, it was tested against unsolved homicide cases by examining BoEs resulting

in the identification of new lines of enquiry (see Chapter 4). It is these solvability factors and their effect on clearance rates which are at the core of this research. Hence, the structure and methodology utilised in this thesis is not the traditional model, being spread over several chapters, each with its own discussion about the significance of the findings and how the results in turn informed the next stage of the research. This novel and unorthodox structure was arrived at after much deliberation and was eventually utilised as it presented the most comprehensive approach to the presentation of the problem.

The first sphere discussed is that of the POI given that it is he who often makes the determination of whether the crime occurs in the first place. The evaluation of the first set of data sourced from NHMP and the literature review revealed core questions about elements of the crimes that remained unanswered, such as what variables specific to the perpetrator impacted the solvability of the case. After a second review of the literature, the need to scrutinise and evaluate police data from a different perspective became apparent, using the second sphere from the Venn diagram of homicide event/crime scene. A second set of data sourced from Computer Operated Policing System (COPS) was assessed using a different methodology specific to answering the unanswered questions. The literature review connected to this section revealed an additional requirement: to interview the police investigators to gain an understanding of their processes within specific areas of investigation. This resulted initially in a pilot study of police interviews, which in turn informed a survey designed to accommodate the operational tempo of the

selected squad. Data were then analysed and, while some results conformed to expectations, other results seemed to contradict previous research raising further questions and prompting another literature review focused on the fourth sphere of 'victims'. These four elements combined created a typical homicide scene familiar to NSW Police and therefore provided the comprehensive model for the thesis, allowing for a holistic understanding of the interplay of solvability factors and the development of a practical mechanism for improving homicide clearance.

This first chapter has provided details of the motivation behind this research, how it was undertaken, what it aimed to achieve, and the methods used to achieve these aims. Chapter 1 provided the contextual background to this thesis and the main research questions examined and introduces a new concept, Applied Victimology, which is an innovative and significant contribution of this thesis and which may assist police to improve homicide clearance rates. Further, the chapter identified evidentiary and extra-legal solvability factors, introduced their importance to the homicide investigators, and finally, outlined the thesis structure.

The next chapter deals with the significance of solvability factors and the aetiology of homicide. Chapter 2 begins with an international and national literature review relating to the incidence of homicide, the sociological reasons and causes of homicide, and some key psychological explanations for this phenomenon. Using aggregate data sourced from the NHMP, the current national picture of homicide is illustrated. The reason for this is to be able to compare and contrast the current national picture to a longitudinal study of NSW, the state that has the largest

number of homicides and lowest homicide clearance rates in the country. The chapter's scope narrows to a state perspective, offering the same information for NSW by statistically analysing 300 cases (150 solved and 150 unsolved), the methodology used and reasons for the choice of the quantitative analysis. The results are presented in tabulated format. The discussion section shows that the results of the data analysis identified nine solvability factors that showed statistical significance, in terms of their predictability. Using those predictive solvability factors, specific information was sought from the NSW Police database, the COPS data, to determine whether a larger dataset could answer the proposition that if crime scene location is predictive of homicide solvability, then if overlaid with homicide typology, would it affect:

- Whether the homicide can be solved
- The time taken to solve the homicide.

'Chapter 3: Police and Homicide Investigations in NSW, Australia', starts by reviewing literature in relation to homicide investigation, solvability factors and clearance rates. Using themes identified in the literature review and attempting to answer the questions raised in the previous chapter, the decision was made to design a pilot study interviewing several NSW State Crime Command (SCC) Homicide Squad detectives to identify their understanding of solvability factors and how they viewed the impact of these factors on case clearance. The method section demonstrates how this study was designed, and how it informed the survey that was sent out to all the serving members of the SCC Homicide Squad, to collect the

views of these practitioners. This chapter also introduces the challenges and ethical considerations for this type of research instrument. The results are presented in tabulated and graphic format. The discussion that follows a qualitative analysis focuses on three aspects:

- Reliance on evidence
- Contradictory views in relation to training, management and team work
- Lack of victim-specific information.

'Chapter 4: Testing Identified Solvability Factors in Two Disparate Homicide Types' illustrates the differences in solvability and how those homicide types influence the actual event, and consequently, how the crime scene is likely to appear, by examining two of the most diverse homicide typologies in NSW – child and gang homicides. This examination begins with a review of COPS data 1997-2012, which leads onto outlining both these typologies and their direct effect on the ability of police to successfully solve these types of crime. The deaths of children 18 years or younger in NSW over a 15-year period (1997-2012) are analysed to illustrate the pertinent and predictive solvability factors related to the death of children and the specific characteristics relevant to this type of investigation.

In contrast, the next section of this chapter demonstrates the vast differences for police when gangs, drugs and other illicit crimes are involved in a homicide event by reviewing gang homicides for the same time period. It is this contrast that best highlights the current range of solvability factors identified in two distinct, but unrelated, homicide typologies. The methodology outlines the process undertaken

and reasoning for the choices made. Results are presented within the text and illustrated by the use of four amalgamated case studies[6]. This is followed by analysis, based on findings and themes identified from the review of literature. Solvability factors are then introduced, specifically nuanced from the homicide type.

'Chapter 5: Considering Victim Variables' presents victims, victimology, and a brief history of criminal profiling through a literature review of international research. This chapter encompasses the changing views about victims of homicide over time, within Australia and internationally, and discusses the concepts of profiling, how it progressed, and where it is currently placed in the criminal justice system of the United States, United Kingdom, and Australia. From the concepts of the profiling method and theoretical victimology, this researcher identified a number of specific and *new* extra-legal solvability factors. These factors include victim disabilities, mental illness, sexual preference, deviant behaviours, victim response, culture, and language. These factors were added to those previously identified and created a new matrix entitled "Applied Victimology" for use in a homicide investigation. The final method used in this thesis, a qualitative examination of 40 BoEs supplied by detectives of the NSW SCC Homicide Squad, is presented. The results, a sample group of five solved and five unsolved cases garnered from the original BoEs[7], are discussed thematically. The final section of this chapter discusses the results in conjunction with an Applied Victimology Matrix, which was created by analysing the successful and unsuccessful cases detailing more solvability factors.

[6] The four case studies presented here to illustrate key findings were amalgamated from ten original cases due to the inability to successfully de-identify each one singly because of low numbers and distinct case features.
[7] Out of 40 cases (20 solved and 20 unsolved).

This new matrix was tested against the BoEs and offered areas where specific unsolved cases could open new lines of possible inquiry, based upon newly identified victim-focused extra-legal solvability factors. It is anticipated that this new matrix could assist police to solve the more difficult unsolved homicides, thus increasing their overall homicide clearance rates.

The issues of accuracy, investigative relevance, and utility of evidentiary and extra-legal solvability factors and Applied Victimology are discussed in 'Chapter 6: Conclusion'. This chapter summarises the major themes and contextual information regarding the new discoveries and results identified and discussed throughout the thesis, including an analysis of the results in light of the theoretical rhetoric of the individual methods utilised. It identifies the limitations of this research and suggests directions for further research. Finally, an assessment of the future use of Applied Victimology in NSW homicide investigations and identification of further predictive solvability factors to increase clearance rates is discussed and supported.

Chapter 2: Homicide and Solvability in Australia

Globally, violent deaths constitute a significant proportion of mortality rates. For a large portion of the world, reliable statistics are not recorded; however, the Geneva Declaration Secretariat posits from international studies between 526,000 (Geneva Declaration Secretariat, 2011) and 650,000 (World Health Organization [WHO], 2008) violent deaths occur annually, approximating 1% of deaths worldwide, excluding military action, civil conflict and genocide (WHO, 2008). Death from intentional, interpersonal violence among young adult males account for over 10% of all deaths globally. In addition to these deaths, interpersonal violence leads to substantial disability resulting from nonfatal injuries. Together, these deaths and injuries account for 1.3% of the total global burden of disease and injury (WHO, 2008). The World Health Organization and United Nation Office on Drugs and Crime publish data on homicide rates for nearly 200 countries.[8]

This chapter begins with a review of solvability factors and their overall significance to homicide investigations and then analyses the aetiology of homicide internationally discovering and examining the reasons people choose to kill another. Lethal violence has been more often linked to communities and areas subjected to deprivation, social inequality, power differentiation, inbuilt injustices within the system of justice, poverty, low levels of education and social marginalisation. Chapter Two will investigate these factors and other identified variables. It will

[8] This information has identified distinct patterns and concentrations of violence globally; for example, several countries in sub-Saharan Africa and Latin America are confronted with very high homicide rates, while many countries in the North have low homicide rates. Many researchers around the world analyse these patterns, but face poor quality data (UNODC, 2012).

begin by defining and identifying the value of solvability factors and will then examine the causes of homicide internationally and then specifically in Australia.

Solvability Factors

Solving complex crimes within the confines of the existing legal system – as opposed to the fictional media accounts – is problematic for a number of reasons. For example, police state that a lack of witness assistance, as seen in gang-related crimes where witnesses purposefully lie (Decker & Curry, 2002), hide and actively try to alter police investigations ("red herrings"), creates very difficult and sometimes insurmountable obstacles for investigators. A more specific focus on the individual victim's variables could assist police to solve these complex crimes.

More offences occur than there are resources to investigate; hence, case screening is a critical element of managing the investigative function (Geberth, 2006). This screening process facilitates "making a decision concerning the continuation of an investigation based upon the existence of sufficient elements of information obtained at the initial investigation" (Crawley, 1977, p. 37). These elements are known as 'solvability factors' (Palmiotto, 1998). While key solvability factors have been identified over time (Bennett & Hess, 2001; Fyfe, Greene, et al., 1997; Gottlieb, Arenberg, & Singh, 1998; Mouzos & Muller, 2001; Turvey, 2006; Wellford & Cronin, 1999) those relevant to this research are age, gender, ethnicity, marital status, location of crime scene and deceased location. Innes (2003), reviewing homicide investigation in the UK, indicated how solvability was often influenced by unpredictable and dynamic factors beyond the control of investigators. More specific

information on extra-legal and evidentiary solvability factors related to police will be discussed later in this chapter.

The use of solvability factors is not new; however, previous work in this area more often focused on the offender or police variables (Geberth, 1996; Wellford & Cronin, 1999), which arguably ignores the victim factors involved in an event. Moreover, previous work in criminal profiling takes psychological theories and clinical practice as a starting point, whereas the model proposed in this thesis takes current police practices as the starting point, with the aim of forming an in-depth understanding of how investigators solve homicides.

A plethora of internet articles, texts, and journals exists worldwide detailing and analysing homicide, clearance rates, and policing, but the research in direct relation to homicide solvability is scarce. In Australia, there is a dearth of literature with regards to the methods used by homicide investigators, the critical nature of victimology and the direct implications of these things on clearance rates. The literature review will demonstrate that there are several works that mention homicide solvability factors as a sub-set to their main theme of homicide or police investigations, but only 11 articles worldwide[9] that are specifically written about homicide solvability. This considerable gap is significant given that so many fields, such as sociology, criminology, and policing studies, have recognised that solvability factors are *predictive* in nature and could assist police by increasing their clearance rates, as well as affect the allocation of resources. Overall, there have been

[9] Adcock, 2001; Brown & Keppel, 2007; Castro, 2011; Drake, 2003; Egger, 1990; Godwin, 1998; Jarvis & Regoeczi, 2009; Keel, Jarvis, & Muirhead, 2009; Keppel & Weis, 1994; McClellan, 2007; Turvey, 2005.

contradictory findings in the international research over the last forty years. Six of these focused on homicide solvability as the main subject of the research directly related to clearance rates. There was only one article by Mouzos and Muller (2001) which analysed the Australian environment, and their study was limited to seven completed police survey responses.

Additionally, although there are few articles on the subject of homicide solvability worldwide, there is a distinct lack of empirical studies regarding homicide solvability and clearance in Australia. Since most of the literature on homicide solvability is based on research conducted in the United States, the situation in that country has become the benchmark used by most other countries to assess their own practices and results. This also applies to Australia, where American practices and procedures have largely been adopted. The lack of research in this area could be due to a lack of access for academics to police data and therefore, a general lack of applied knowledge in the field (Laycock, 2001). Without specific research, police management will find it difficult to clearly establish the factors that promote the clearance of a homicide incident. Grau and Jacobson (1981, p. 17) argued that it was the initial investigation that led to the satisfactory outcome in closing a case successfully, stating that "solvability factors should then be determined to assess the likelihood that a more extended investigation will yield results. Steps in pursuing these solvability factors are described, along with the process of communication and decision making".

Mouzos and Muller's (2001) article is not dissimilar to that of Wellford and Cronin (1999). They both show factors that appear to affect homicide solvability. The first issue they raised is that the solvability of a homicide is dependent on the individual incident. For example, a homicide is inherently more difficult to solve if it occurred within the commission of another crime, such as an armed robbery or as a *stranger* homicide or *drive-by*[10]. Their research identifies patterns that differentiate solved and unsolved homicides, which suggest that there is not just one reason for a homicide, but a variety of factors, which contribute. Schramm (2001) discusses the importance of furthering police education, such as trained specialists, resources and strong management teams, and the development of technology to increase future homicide solvability. Mouzos and Muller (2001, p. 6) confirmed what other academic writers have stated previously: "these factors should increase the chance of solving any given homicide, but it should be cautioned that there is no magic formula for solving all homicides".

Grau and Jacobson (1981), editors of the *Criminal and Civil Investigation Handbook*, specifically addressed the initial investigation of serious crimes. Steps in identifying solvability factors were described, along with the processes of communication and decision-making by police. Researchers have found that solvability of homicides is affected by inherent conditions of police investigative work itself, the idiosyncratic characteristics of agencies and their investigators, variations in social structure, and the victims themselves (Keppel, 1992; Mott, 1999; Ponce et al., 2007). Drake (2003) suggested that the personal attitude of the

[10] (of a shooting or other act) carried out from a passing vehicle

investigating officers could be considered as a solvability factor in, for example: Gay, Lesbian, Bisexual and Transgendered (GLBT) violent crimes which have low clearance rates overall. Adcock (2001) argued that the morale of an investigative team and their levels of training could influence whether a case is solved. Homicide incidents with witnesses reporting information about the POI, or occurring between intimates or acquaintances, should be easier for police to solve (Geberth, 1996; Litwin, 2004; Riedel & Rinehart, 1996).

Wellford and Cronin (1999) identified that homicide solvability is directly related to police training, management styles, budget restrictions, conditions of the crime scene, and the victims themselves. An issue, which in previous years has been under-researched when discussing homicide, is that of police investigators' efficacy in identifying and charging the perpetrator. Mouzos (2000) stated that there was a modest amount of convincing research about what makes a specific homicide more or less likely to be cleared. Wellford and Cronin (1999) identified 51 variables within a homicide event that directly affected clearance rates. Within these 51 variables, 14 were *not* related to police practice, the residual variables were related to the quality of, and access to, witness information, informants, and records or datasets as well as human and financial resourcing, and time taken to complete specific tasks. Literature on increasing clearance delved into the theoretical reasons why police need to dedicate specific resources to try to solve more homicides but lacked the practitioner's viewpoint. Wellford and Cronin (2000) state that decreases in police resources and the decrease in the willingness of bystanders and witnesses to provide

information, particularly in urban areas, also contributed to the increase in unsolved homicides. The primary text from a police investigation perspective is by Geberth (2006), originally written in 1996 specifically for police as a manual on investigating homicide. Solvability factors and clearance rates are mentioned throughout his work, especially in the chapter on the identification of suspects, in which he outlines key solvability factors. Geberth borrowed heavily from the work of Snyder, Wilson and Muehlberger (1944) on homicide investigation. Geberth's manual provided practical information for coroners, police officers and other investigators, showing that core processes have not changed significantly over decades.

Riedel and Rinehart (1996) also concluded in their research in Chicago that concomitancy was a major factor in solving homicides. In contrast, research by the Technical Working Group on Crime Scene Investigation (2000), Easteal (1993a) and Indemaur (1996) proposed that the policies and procedures of particular police departments had more of an effect on solvability than the characteristics of the crime itself, while others focused on the investigating officer as the most important variable (Geberth, 1996b; Horvath, Meesig, & Lee, 2001; Karmen, 1996; Puckett & Lundman, 2003; Wellford & Cronin, 2000).

Marché (1994) contended that the investigative experience of individual detectives was a crucial factor in solving a homicide. Conversely, Puckett and Lundman (2003) found that the experience level and workload of an investigator had no effect on solvability rates. However, other researchers have found that the characteristics of the crime can directly influence solvability. These factors included

expressive or instrumental motivations for the offence (Block & Block, 1992), victim-offender relationship (Block & Block, 1992; Wolfgang, 1958), execution of the offence (Salfati, 2003; Browne, Williams, & Dutton, 1999), the commission of other crimes (Salfati, 2000; Salfati & Haratsis, 2001), and financial constraints, with reductions in the number of personnel and resources for training or workload (Puckett & Lundman, 2003; Schramm, 2001; Wellford & Cronin, 2000).

The British *Murder Manual* (2006), created by the National Centre for Policing Excellence for Association of Chief Police Officers Crime Committee (ACPO) is in its third edition. It includes investigative models, theories, planned methods of investigation and information relating to the use of expert witnesses. Solvability factors are not dealt with in any detail in this publication, yet it is one of the major publications produced by the United Kingdom and is frequently used by Senior Investigating Officers (SIOs) in both civilian and military policing circles.

The Significance of Solvability Factors

A useful illustration of solvability factors comes from Hirschy (2003, p. 8), who wrote about them in relation to robbery in the US:

> Solvability factors are valuable pieces of case information (i.e., suspect name, physical evidence, etc.) that can lead to the arrest of an offender(s). Solvability factors can be used to predict case outcomes. Solvability factors can be used to screen offences and determine which cases should be assigned for further follow-up. Prior research on the use of solvability factors to predict case outcomes is limited. Again, there has been little research into the use of solvability factors to predict criminal case investigation outcomes. In fact, most of the research on the valid use of solvability factors centers around their

> use for burglary and robbery offences. However, basic criminal investigation strategies and tactics are similar for most types of crime.

Whilst this quote refers to criminal investigations overseas, the issues in Australia, and specifically NSW, are similar. The cases not easily solved require more time, more staff dedicated to the investigative teams for the duration of the case, bigger budgets, and more investigations knowledge and experience. Triage of cases is assessed primarily on the quality of the solvability factors present at the crime, for both current and unsolved cases. Contrary to Hirschy's (2003) statement, Crowe wrote, "The application of solvability factors reveals that somewhere between 65-85% of criminal complaints are not solvable. That is, there is little likelihood of the case being solved by a detective conducting an investigation" (as cited by Fyfe, Greene, et al., 1997, p. 189).

Fyfe and colleagues stated that identifying solvability factors has been a significant advance in modern policing (Fyfe, Greene, et al., 1997). Experience has demonstrated that the greater the numbers of solvability factors present at a homicide crime scene, the greater the probability of solving the crime. The opposite has also been found, where fewer factors increase the difficulty of solving the crime, which Gottlieb and others supported in their research (Bennett & Hess, 2001; Gottlieb, Arenberg, & Singh, 1998). Consequently, when police management is assessing the allocation of limited resources to achieve the best clearance rates, the presence of more solvability factors for a particular scene will ultimately influence their decision.

In the existing offender-focused solvability literature (Geberth, 1996b; Mouzos & Muller, 2001; Osterburg & Ward, 1992; Wellford & Cronin, 1999), factors can include the following:

- Belief that crime may be solved with publicity and/or reasonable additional investigative effort (Rochester Police Department, 2003)
- Description of POI's vehicle; complete or partial licence plate number recorded
- Existence of a significant *modus operandi* (Method of Operation or MO)
- Knowledge of where the POI can be located, their home address or locations frequented
- POI can be identified; either police have their full name, partial name, nickname or alias, or description of POI's scars, tattoos, body piercings, unusual features such as broken or rotten teeth, distinctive speech patterns or accent, distinct body odours or distinctive clothing characteristics (such as patches, logos or emblems)
- Possibility or opportunity for anyone, other than the POI, to have committed the crime; for example, the number of POIs is definitely limited to those that had knowledge and opportunity to commit the offence
- Presence of significant physical forensic evidence, such as latent prints, DNA, bullets/casings, or trace evidence which has been collected at or near the crime scene
- Property with traceable, identifiable characteristics, markings or serial number, owner applied marks or recorded damage
- Time range relevant to the event

- Witnesses to the crime who are credible and reliable.

It is important for effectiveness of the Applied Victimology Matrix to add further nuance to these factors, in that some of the evidence that is collected will be used in the preparation of the BoE. Some factors carry no evidentiary weight but are significant in answering 'why this victim at this time in this place?', such as religious affiliation, sexual preference, or ethnic culture. The first set of factors, which tend to be those on which police place their main focus, will be referred to as evidentiary solvability factors, examples of which include crime scene location, weapon utilised, and relationship between victim and offender (Castro, 2011). The other category, which includes many of the new victim-focused variables added in this thesis, will be referred to as extra-legal solvability factors, focusing on the broadest nomothetic grouping of victim (and POI) variables. Examples include age, employment, gender, intoxication, marital status and motive. Both these categories will be explored below in more detail.

Evidentiary Solvability Factors

The body of research regarding the relationship of solvability factors to the clearance rates from the homicide investigators' view is lacking internationally. As noted above, solvability factors have been divided into two different frameworks that use *evidentiary* and *extra-legal* solvability factors as critical to successful case clearance. Existing studies have produced inconsistent results as to whether evidentiary or extra-legal factors are more important, such as whether they contribute more variance to clearing a homicide (Castro, 2011). However, there is

general consensus among researchers that knowledge about the murder weapon, victim-offender relationship, and body location increases the likelihood of solvability (Castro, 2011; Geberth, 2006; Litwin, 2004; Wellford & Cronin, 2000). Due to the physical, evidentiary aspects of this category, it implies that particular types of homicides are more complicated to solve than others; for example, the difference between an organised crime "hit" as opposed to a "smoking gun" intimate homicide. This is due to:

- Predictive solvability factors, that is, the correlation between crime scene location and positive clearance; for example, private residence versus public crime scene
- Reduced availability of forensic evidence, such as in a drive-by shooting where a significant part of the crime scene is mobile and usually moving away from the impact site at high speed
- Personal relationship, or lack of one, between victim and POI
- Deliberate misleading information to confuse the investigation, colloquially referred to as "red herrings"
- Lack of witnesses willing to speak to police.

Extra-Legal Solvability Factors

Evidentiary solvability factors are the factors that police normally focus on within a crime scene because, in most cases, they can be collected, tested, and presented at court as part of their BoE; for example, forensic evidence in the form of a weapon. In contrast, extra-legal factors are less tangible; they are qualitative, often

social as opposed to physical in nature, but they are important in providing a more nuanced picture of the crime.

Extra-legal factors within an investigation may influence the way that police view the victim, and therefore, alter the investigation pathway, directly affecting the possibility of clearing it. For instance, extra-legal factors, such as adverse parenting style in a case of child homicide, may carry no evidentiary burden in court but they may significantly contribute to solvability, both by adding valuable information for its own sake but also by allowing further evidentiary factors to be identified.

In the course of this research, some factors were found to be more indicative than others in solving homicides. These variables were further grouped and labelled as *predictive* extra-legal solvability factors. Examples of some of these factors discovered in this research were age, gender, indigenous status, occupation and marital status. The challenge faced by police is to be able to identify these factors and utilise them within their investigations. These factors are discussed in the results section for victims (Chapter Five) in this thesis.

Aetiology of Homicide

Rosenfeld and Messner (1991) posited that, in general terms, homicide is perpetrated as a result of greed, passion, the effects of alcohol/illicit drug consumption, gender, ethnic and racial differences, religion, perception of sexual ownership, social status, mental illness, and a need for power and control. Egger (1993a) focused on four main homicidal influences: race, social class, masculinity, and intoxication. Homicide was approached from a social perspective in research

conducted by the Technical Working Group on Crime Scene Investigation (2000). Their work included review and comparison of homicide data, investigation of cultural and sub-cultural theories of homicide, trends and patterns of homicide, and the importance of categorisation and analysis. Beeghley (2003) argued that the anomic society of the United States (US) arose due to unequal socio-demographics, the development of illegal drug markets, the availability of guns, discrimination, and the media's consistent portrayal of violence. He asserted that it is the combination of these factors which exacerbates the homicide rate in the US.

Violence often reflects inequalities of age, economy, ethnicity, gender, race, and religion (Hickey. 2003; WHO, 1992). Yarvis (1991) argues that the probability of an individual committing violent crime is higher in persons who reside in an extremely violent society or relationship, than among individuals who live in relative peace. He also states that social, cultural and demographic reasons exist for perpetrators behaving the way they do (Yarvis, 1991). Mouzos (2000) argues that the annual numbers of homicide victims demonstrate that there are many individuals who use lethal violence to resolve ongoing interpersonal conflict.

Rates

Homicide rates are comparatively steady in many regions around the world; they are declining in Central Europe and yet remain considerably higher in Eastern Europe, the Caribbean and the four Latin American regions, as compared to many of the world's other regions (UNODC, 2012). Rates of homicides are lower in high-income countries, with the significant exclusion of the United States. The highest

murder rate internationally is in El Salvador, where the most recent data (2006) suggest that there were 58.07 homicides per 100,000 people. Russian, Mexican, and Croatian homicide rates are significantly higher than in the US, which has a rate approximately four times that of Australia (UNODC, 2012).

Based on homicide data collected by the World Health Organization (WHO, 2002) illustrating the cause of death in 52 nations, Australia was ranked at a moderate level (29th place) and is positioned between Tajikistan and Iceland. Australia's present rate is comparable to its neighbour New Zealand, a number of northern European countries, and Canada, while it is nearly double that of Japan and Norway. A suggestion for this phenomenon is that these countries are historically homogenous societies and do not suffer from the same cultural and social problems evident in more multicultural, and importantly, unequal, societies.

Over the past 25 years, the homicide rate in Australia has decreased from 1.9 per 100,000 population to 1.1 per 100,000 population (Australian Institute of Criminology, 2015; Bryant & Cussen, 2015). Despite this, the national homicide clearance rate has remained relatively stable, at around 88% (Bryant & Cussen, 2015; Mouzos & Muller, 2001; Strang, 1992). It is necessary to understand why the ability of police to clear homicides in Australia is not improving, so that strategies can be developed to address this. This way, the best possible outcomes can be achieved for those affected by homicide, and public confidence in the police will not be eroded (Turner & Kosa, 2003). The following section will first discuss research findings from overseas, and then discuss the findings of the one known study that has been

conducted in Australia. The vast majority of this overseas research has focused on the United States where a decline in the homicide clearance rate has been evidenced for decades, despite a decline in the national homicide rate (Keel, Jarvis, & Muirhead, 2009). Much of this research has been cross-sectional, where factors associated with homicide clearance have been identified. However, two longitudinal studies, which examined the influence of changing characteristics on the homicide clearance rate, are also discussed.

Overseas Research

Victim characteristics. With regard to victim characteristics, overseas research has generally found that homicides involving younger victims are significantly more likely to be cleared than homicides involving older victims (Addington, 2006; Alderden & Lavery, 2007; Jiao, 2007; Lee, 2005; Litwin, 2004; Litwin & Xu, 2007; Puckett & Lundman, 2003; Regoeczi, Jarvis, & Riedel, 2008; Trussler, 2010). It has also generally found that homicides involving victims known to the offender are significantly more likely to be solved (Jiao, 2007; Lee, 2005). Mixed results have been found for victim gender, with some studies finding that homicides involving female victims are significantly more likely to be cleared than homicides involving male victims (Alderden & Lavery, 2007; Lee, 2005; Regoeczi et al., 2008; Trussler, 2010); others finding the opposite (Jiao, 2007; Litwin & Xu, 2007); and others still finding that gender does not significantly predict homicide clearance (Litwin, 2004; Puckett & Lundman, 2003). Similarly mixed results have been found

for victim race/ethnicity and victim prior record (see Alderden & Lavery, 2007; Jiao, 2007; Litwin, 2004; Litwin & Xu, 2007).

The few longitudinal studies produced provide mixed support for the above relationships. A study by Xu (2008) found that the percentage of stranger homicides had a significant negative relationship with the homicide clearance rate in Chicago only. The percentage of Latino victims had a significant negative relationship with the homicide clearance rate (like the percentage of stranger homicides). However, no relationship was found between the clearance rate and the percentage of male victims, African-American victims, or victims with a prior record. These findings are supported by Ousey and Lee (2010), who found that the percentage of male victims and victims with a prior criminal record had no significant effect on the clearance rate over time. These authors found the same for the percentage of victims aged 35-54, regardless of gender or race.

Incident characteristics. Numerous incident characteristics have also been linked to homicide clearance overseas. Cross-sectional research has consistently found that homicides involving firearms are less likely to be solved than those involving other weapons (e.g., knife, hands and feet; Addington, 2006; Alderden & Lavery, 2007; Puckett & Lundman, 2003; Trussler, 2010; Wellford & Cronin, 2000). It has been suggested that this is because weapons that bring victims and offenders in close proximity tend to produce more physical evidence (Alderden & Lavery, 2007). However, longitudinal studies have produced conflicting results, with one study finding that as the percentage of homicides using firearms has increased, the

homicide clearance rate has decreased (Ousey & Lee, 2010); but another finding that the percentage of firearm homicides had no significant effect on clearance over time (Xu, 2008). These differing results may be due to the fact that Xu (2008) used data from Chicago only, whilst Ousey and Lee (2010) used national data. The location of the homicide/body is another characteristic that has been found to be important in homicide clearance. Several studies have found that homicides occurring in residential locations are more likely to be solved than those occurring in outside, secluded areas (Litwin & Xu, 2007), in general public (Litwin, 2004), or in all other locations (Addington, 2006; Regoeczi et al., 2008). They have also found that homicides occurring in public areas are more likely to be solved than those occurring in secludedareas (Litwin & Xu, 2007) and those occurring in bars / public houses (Litwin, 2004). However, the one longitudinal study that looked at residential location found that it did not significantly affect homicide clearance over time (Xu, 2008). This study also found as the percentage of homicides where the victim was found inside a vehicle increased, the homicide clearance rate decreased (Xu, 2008).

Another incident-related characteristic consistently found to predict homicide clearance is homicide circumstance. A study by Litwin (2004) found that homicides involving general altercations were significantly more likely to be cleared than homicides with unknown motive, concomitant felonies, and drug- or gang-related homicides. Additionally, Litwin and Xu (2007) found that drug- or gang-related homicides, money-related homicides, and domestic violence homicides were

significantly more likely to be cleared than other/unknown homicides[11]. This latter finding is supported by Jiao (2007), who found that domestic violence homicides were significantly more likely to be solved than instrumental/expressive homicides[12] and other/unknown homicides. Overall, these findings partially support longitudinal findings. Specifically, Ousey and Lee (2010) found that the homicide clearance rate decreased when the percentage of argument-related homicides decreased. Additionally, Xu (2008) found that as the percentage of unknown homicides and concomitant homicides increased, the homicide clearance rate decreased; however, he also found that the percentage of domestic homicides had no effect on clearance over time.

Police investigative practices. Not only are the characteristics of the victim and incident likely to influence homicide clearance, but so too are factors associated with police investigative practices. Despite their potential importance, however, few studies have examined this. A study by Keel et al. (2009) found that the formal training of detectives and use of 'sophisticated analytical devices' (e.g., blood splatter analysis, voice stress analysis) had a significant positive effect on homicide clearance rates. Additionally, Puckett and Lundman (2003) found that detective experience (years of service, familiarity and training) and workload had no discernable effect on homicide clearance. This latter finding is supported by Ousey and Lee (2010) who found that detective workload had no significant effect on the

[11] The category other/unknown homicides included all homicides that were not drug- and gang- related, money-related, or domestic violence related (for example: those that were mental disorder related)

[12] "A homicide as expressive if "the offender's immediate and primary motive is to hurt the other person' and 'instrumental' if 'the immediate and primary goal is to obtain money or property'"(Block & Christakos, 1995, p. 500, as cited in Jiao, 2007, p. 7).

clearance rate over time. An earlier study by Wellford and Cronin (2000) found that various factors increased the likelihood of homicide clearance, including when 'three or four detectives [were] assigned to the case', 'a detective [arrived] at the scene within 30 minutes' and 'a computer check [was] conducted on the suspect and firearm'.

External characteristics. Although rarely examined, some overseas studies have found that external environmental characteristics increase the likelihood of homicide clearance. While quantitative findings by Davies (2007) found that the political environment had little impact on homicide clearance rates; qualitative findings found that media attention, local political figures, and prosecuting attorneys had an impact on police practices and procedures, investigative decision making, and perhaps even changes in homicide clearance rates. The finding that media coverage can affect homicide clearance is supported by Lee (2005), who found that in Los Angeles, cases that were covered by the *Los Angeles Times* were significantly more likely to be cleared (10% increase).

What do these findings suggest? These findings suggest that an increase in the percentage of stranger homicides may have contributed to the decline in the US homicide clearance rate, and perhaps also the decline in other countries. It is unclear whether changes in the percentage of male victims and victims with a prior criminal record have had a significant effect. The two longitudinal studies suggest that they have not. However, cross-sectional research has been mixed. More longitudinal research needs to be done before drawing conclusions. The same

applies to the age of the victim, although it appears that this factor is more likely to be identified as a contributor in future research than the previously mentioned factors. With regard to race, findings from Xu (2008) suggest that the percentage of African-American victims has no relationship with the clearance rate over time; however, the percentage of Latino victims does, with an increase in Latino victims contributing to a decrease in clearance rates. This supports most, but not all, cross-sectional research. Once again, more research needs to be done in this area before conclusions are drawn.

With regard to incident characteristics, findings suggest that an increase in the percentage of firearm homicides may have contributed to the decline in clearance rates (although perhaps not in Chicago, specifically). Changes in homicide circumstances also seem to have contributed to the decrease. Specifically, findings suggest that an increase in the percentage of homicides with unknown circumstances and concomitant felonies, as well as a decrease in argument-related homicides may have contributed to the decline. Other changes in homicide circumstances may have also had an effect (e.g., changes in the percentage of gang-related homicides); however, this would need to be confirmed by longitudinal research. With regard to homicide/body location, findings from Xu (2008) suggest that the percentage of homicides occurring in the home has no relationship with the clearance rate over time. However, this is not what cross-sectional findings suggest. It may be that Xu's results only apply to Chicago, or it may be that the relationship between home location and homicide clearance is time dependent. Xu's (2008)

results also suggest that an increase in homicides occurring in vehicles may have contributed to the decrease in the clearance rate. Once again, there is not enough evidence to know whether these results apply to locations outside of Chicago.

Australian Research

In their study, Mouzos and Muller (2001) used National Homicide Monitoring Program (NHMP) data from 1 July 1989 and 30 June 2000 to examine the factors that differentiate solved and unsolved homicides. Results showed that unsolved homicides were significantly more likely than solved homicides to involve a victim over the age of 30 years (66.28% vs. 57.87%), a victim in the labour force (36.05% vs. 25.82%), a non-Indigenous victim (96.51% vs. 86.36%), and a victim who not was under the influence of drugs or alcohol (81.40% vs. 69.44% and 85.58% vs. 66.83%, respectively). The gender and marital status of the victim was not found to significantly differentiate solved and unsolved homicides. Additionally, unsolved homicides were significantly more likely than solved homicides to occur during the course of another crime (22.56% vs. 11.91%), involve a single victim (93.26% vs. 87.48%), involve the use of a firearm (25.35% vs. 19.87%), occur between 6am and 6pm (45.36% vs. 37.21%), and occur in a non-residential location (56.98% vs. 38.09%). The day of the week (weekday or weekend) was not found to significantly differentiate the two homicide types. Furthermore, the offenders of unsolved homicides were significantly more likely than the offenders of solved homicides to be male (92.5%), be aged between 18 and 34 (73.1%), be non-Indigenous (83.6%), be single (never married; 82.1%), be unemployed (67.2%), have a criminal history

(49.3%), have committed the crime with others (68.7%), and be unknown to the victim (73.1%; Mouzos & Muller, 2001).

As well as examining the victim and incident factors that differentiate solved and unsolved homicides, Mouzos and Muller (2001) looked at the factors that investigators *perceive* as being important to homicide solvability. This was considered essential as the NHMP data only covered a limited range of variables, none of which were specifically related to the police response. Results showed that participants felt that the availability of sufficient time and resources (e.g., enough support staff and analysts), being able to allocate an experienced detective to a case as early as possible, being able to promptly attend the scene, getting an experienced detective to quickly secure the crime scene or scenes, the presence of witnesses, and the use of technology (e.g., listening devices and telephone intercepts) were important factors that aid homicide solvability. Conversely, witness reluctance (particularly in immigrant communities), the organisational structure, legal requirements, the time taken for forensic examinations, and poor information flow were identified by participants as factors that hinder homicide solvability.

Homicide – Australia

> Homicide rates in Australia have fallen to historic lows according to figures released by the Australian Institute of Criminology. Those figures show that in every category, the incidence of murder is falling. In particular, the chance of being killed randomly by a stranger is lower than it has ever been. However, while homicide rates in the Indigenous community are also down, they are still four times the national average (Jarvis, 2013, p. 2).

Homicide rates in Australia have declined over the last 30 years, yet the percentage of solved cases in New South Wales (NSW) has remained relatively stable over the same time period. In Australia, the term *'homicide'* covers the offence of murder and manslaughter and it is an offence for which data are generally and consistently available (Mouzos & Muller, 2001). Whilst rare, homicide is considered one of the most serious crimes committed in this society. Although the incidence of homicide compared to other crimes is described as low-volume, there have been on average 300 incidents per annum officially recorded at the NHMP since 1989 when the program commenced (AIC, 2010), with the current annual average rate being 220 (Chan & Payne, 2013).

The aim of a homicide investigation is to identify and arrest the Person of Interest (POI), and within this process, the victim becomes a 'piece of the evidence' (personal communication, Beresford, August 6, 2006). Variables that are related to the victim, such as age, gender, criminal history (or lack thereof), socio-economic circumstances, marital status, drug and alcohol usage, are all taken into account, presuming of course that the identity of the victim is known. If the identity of the victim is unknown however, other variables increase in importance, such as crime scene location, biological samples such as DNA and fingerprints, and personal identifiers such as tattoos, piercings and scars (Geberth, 2006).

To delve further into the reality of homicide in the Australian context and those involved in these events the next section of this chapter offers a nomothetic picture of Australian homicide, particularly from the POI and incident perspective.

Nomothetic Review of Homicide in Australia 2008-2010

The term 'POI' is commonly used by NSW police to identify the individual(s) that they believe may have participated in the homicide event and can assist police with their inquiries. They do not use the term 'offender' until the individual is committed to trial and found guilty of the crime. The term 'suspect' is more commonly used in the US to define the individuals who are classified in NSW as POIs. This term 'suspect' is not commonly used in the Australian criminal justice system (See Glossary of Terms – Person of Interest).

This section of the chapter will describe the demographic variables associated with the prevalence of Australian homicide, incorporating all types of homicides offering the current nomothetic review of Australian homicide events from the offenders' perspective, noting that all this information is relevant to persons who have been convicted of homicide. The data are extracted from the NHMP during 2008–2009 and 2009–2010 (Chan & Payne, 2013), which are the most current data released for public review in 2013, and all percentages are as outlined in the data. The list below summarises the key facts of the cases.

- There were 510 homicide events recorded, over a two-year period, of which 9% (n = 46) remain unsolved. Of the 464 solved events, 88% of events (n = 407) had one offender, with 9% of the events (n = 40) involving two offenders 3% of events (n = 16) had three offenders and finally, 3% of the total solved cases (n = 15) involved four or more offenders, for a total of 611 offenders. During 2008–2009 and 2009–2010, multiple offender homicide events occurred more often with

strangers (30%, *n* = 139) than between people who had a previous relationship, 1.5% (*n* = 7) were in a domestic relationship, and 7% (*n* = 31) were acquaintances at the time of the event, with 19 events involving two offenders; whereas 12 involved three or more offenders. The declining trend in intimate homicides and increasing trend in stranger homicides is an area which needs further research but increases the value of the outcomes from this thesis on solvability factors and their impact on clearance rates.

- Of the 611 known offenders, 6% (*n* = 38) were under 18 years and only one of this group was female, with 5% (*n* = 32) aged between 15 and 17 years, and only 1% of juvenile offenders (*n* = 6) being aged 10–14 years. The youngest recorded offender was aged 12 years at the time of the incident they were charged with (Chan & Payne, 2013, p. 27). Research identified a uniform distribution of offenders across the age range from 18 to 49 years. Approximately 3% of known offenders (*n* = 15) were over the age of 65 years, the oldest being 92 years at the time of the homicide event. The average offender age for all recorded homicides during 2008–2009 and 2009–2010 was 33.2 years, similar and comparable with previous years of data collection.
- Ingestion of alcohol, by either the victim or the offender, was recorded in almost half of all events (47%, *n* = 238). In relation to acquaintance homicide events, the offender was identified as having consumed alcohol in 43% of cases, while the rate was 36% for domestic homicides (Chan & Payne, 2013, p. 17). In 20% of homicides (*n* = 101), illicit drugs precipitated the event, although of the known

offenders in the 464 solved cases, 15% (*n* = 78) were recognised as being intoxicated at the time of the event[13].

- Homicide during, or due to a co-committed crime occurred in 13% (*n* = 67) of all homicide events, during 2008–2009 and 2009–2010 (also known internationally, as a concomitant felony[14] [15]), such as robbery or sexual assault. Violent crime against the person, such as assault, was a major trigger in these types of homicides (3%, *n* = 15). Also, robbery (2.5%, *n* = 13), drug offences (2%, *n* = 11) and sexual assault (1%, *n* = 4) were identified by police as further precipitating offences.

Records indicate that 45% of the offenders in the solved cases (*n* = 277) identified in the 2008–2009 and 2009–2010 collection period had a previous criminal history involving at least one conviction. The remaining 55% of offenders (*n* = 334) in the solved cases did not have a prior criminal conviction recorded. Previous criminal records, for both male and female offenders, can be categorised in the following way:

- The single most commonly recorded offence (26% for males and 18% for females) was *other* assault (25%, *n* = 152), followed by drug offences (6%, *n* = 39) and property offences (4%, *n* = 24)
- A previous conviction for another homicide event was indicated for 3% of males (*n* = 15)

[13] Noteworthy, offender intoxication is a subjective assessment made by investigating officers, whereas post-mortem toxicological tests can confirm whether the victim ingested any intoxicating substances.
[14] A felony is an offence such as murder or burglary, considered in US and UK as graver crimes than those termed 'misdemeanours'. In the US, if one is convicted of a felony, imprisonment ranges start at one year and increases from there.
[15] In Australia the CRIMES ACT 1900 s580E abolished any distinction between felony and misdemeanor; presently, the offences once characterised as felonies are known as serious indictable offences and misdemeanours is as minor indictable offences.

- Sexual assault was recorded for 3% of male offenders (*n* = 14).

Generally, female offenders (34%) are less likely than male offenders (47%) to possess prior criminal convictions.

There are records regarding employment for 430 homicide offenders during the period of review[16]. Of those individuals, 36% (*n* = 156) were gainfully employed at the time of the homicide, 42% (*n* = 182) were unemployed and 8% (*n* = 36) were recorded as studying, while 2% of offenders (*n* = 10) were responsible for domestic duties at the time the homicide event occurred. Unemployment amongst male homicide offenders remains greater than with female offenders (43% compared to 38%); which is similar to previous years' records and trends.

For the duration of 2008–2009 and 2009–2010, and comparable with previous trends identified in the NHMP data, Indigenous Australians were overrepresented as offenders. These offenders equated to 13% (*n* = 81) of the total offender cohort, a rate five times higher (7.1 per 100,000[17]) than the equivalent homicide rate of 1.3 per 100,000 among the non-Indigenous population (Chan & Payne, 2013, p. 28). Comparable with the non-Indigenous cohort, Indigenous offenders were more likely to be male (85%, *n* = 69) than female (15%, *n* = 12). Chan and Payne (2013, p. 28) state:

> Both male and female Indigenous offenders were overrepresented; however, the extent of overrepresentation was greater among the Indigenous male population. For example, during the 2009–2010 reporting period, the rate of offending among Indigenous males was close to six times (12.8 contrasted to

[16] The outstanding 177 offenders' employment status was not known or recorded by police at the time of collection.
[17] Calculated as the estimated number of known offenders per 100,000 of the Australian population.

> 2.2 per 100,000) higher than among non-Indigenous males. Conversely, the rate of offending among the Indigenous female population was less pronounced, although still more than three times higher than the non-Indigenous female population (1.4 contrasted to 0.4 per 100,000) [18].

In relation to gender, the female population of offenders (approximately 0.4 per 100,000) remained comparatively stable in relation to previous years of recording. In contrast, the rate of offending for males (2.5 male homicide offenders per 100,000 population) continues to decline; for example, in 1992–1993 the figure was 3.8 per 100,000, a difference of 34%. NHMP records illustrate over 23 years of collection that males comprise in excess of 80% of all known homicide offenders. Between 2008–2009 and 2009–2010, 88% of perpetrators were identified as male (n = 538), 11.5% were female (n = 71) and ~0.5% (n = 2) of perpetrators for whom gender was not recorded.

Although the data for homicide from the NHMP show that violent crime is declining, those that are still occurring have innumerable costs, not only to the individual victim and their families, but also to the community and the nation. To better understand the specifics of homicide victimisation in Australia the next section with present a general review.

Nomothetic Review of Homicide Victims in Australia

Mouzos and Muller (2001, p. 2) stated that:

[18] Despite these results, the overall rate of offending for both male and female Indigenous offenders has decreased, with the overall rate reaching an historic low of 7.1 offenders per 100,000. The decline in the offending rate in recent years has been most pronounced for female Indigenous offenders (Chan and Payne 2013, p. 28).

> …when compared to solved homicides, unsolved homicides are more likely to occur in the course of another crime, to involve a single victim (as opposed to multiple victims), and to take place in a non-residential setting. The victims of unsolved homicides are more likely to be non-Indigenous, in the labour force, aged 30 years or older, and not under the influence of alcohol at the time of the incident.

The trend of declining homicide numbers in Australia reflects the decrease of homicide numbers internationally (UNDOC, 2011). Over the past forty years, international homicide rates have gradually declined and there has been a significant reduction in the solvability of homicides, measured as cases cleared by arrest (Keel, Jarvis, & Muirhead, 2009). The reason for this discrepancy is two-fold. Firstly, the type of homicide is changing; for example, historically the majority of all homicides were intimate in nature, now the ratio has shifted and there are now more 'stranger' and acquaintance homicides occurring, where there is no obvious link between the victim and the person of interest as compared with the last 25 years in Australia. Secondly, the nature of the general public assisting police has changed in that more frequently police are recording that witnesses withdraw their stories, change them or in fact deny that they witnessed anything. It can be argued that this could be linked to the changing nature of homicide type, for example: more drug or gang related deaths where witnesses are frightened or intimidated by perpetrators or their peers.

According to the most recent NHMP data, 257 incidents of homicide occurred in the financial year 2009-2010. Within this number of homicide events, there were 273 victims and 308 POIs (Chan & Payne, 2013). This number decreased from the

previous year's recorded homicides and is consistent with important longitudinal trends showing fewer incidents 'per head per 100,000' of the population. The NHMP framework categorises homicide victim-related data according to age, gender, marital status, racial appearance, prior criminal history, employment, alcohol/illicit drug use and cause of death. The NHMP adopted this framework so that it would be possible to ascertain the social factors that are likely to co-exist in the context of particular types of homicides and to help identify the most vulnerable groups of people. The main solvability factors in these incidents were assessed and the results are listed. Populations with the greatest risk of homicide victimisation are males, minorities, and the young. According to Chan and Payne (2013), for 2009, 75.6% of homicide victims were male, 56.6% were between the ages of 15 and 34, and 44.2% were Indigenous or members of other minority groups.

The annual homicide rates in Australia from 1915 to 1998 are displayed in the following graph (Figure 3). World War II (1939-1941) witnessed the lowest rates of homicide in the first half of the twentieth century (Indermaur, 1996; Mouzos, 2003) probably due to the absence of the main pool of possible perpetrators, being unmarried males, aged in their mid-twenties. During the 1950s and 1960s, the rate increased considerably to 1.5 per 100,000 population and the upward trend continued in the 1970s, reaching the level of around 2.0 per 100,000 population at the end of that decade. Although there were two substantial but temporary variations in the 1980s, the outcome of one of those peaks was the highest homicide rate recorded in Australia (rate of 2.4 per 100,000 population in 1988).

The rate of homicide per 100,000 of the population in 2009-2010 remained stable at 1.2 incidents, unchanged from the previous year of collection. It is one of the lowest recorded since the establishment of the NHMP. Even though numbers of homicides are declining in Australia, not all jurisdiction's clearance rates have followed suit.

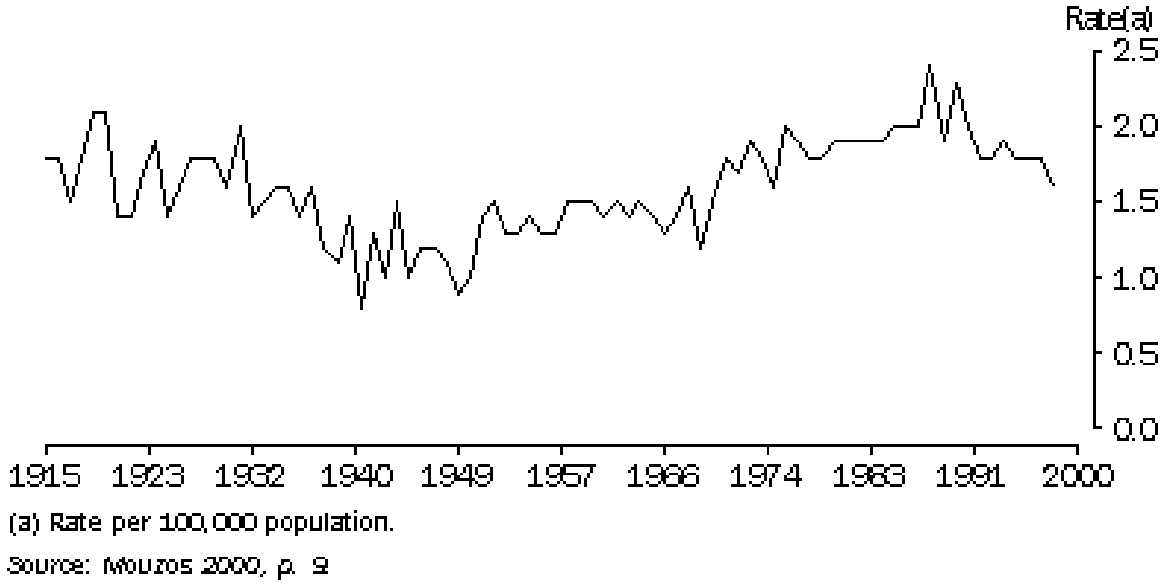

Figure 3. Trends in homicide, Australia 1915 – 1998.

Clearance rates are much higher when a relationship exists between the victim and POI, rather than when homicides are committed by acquaintances or strangers (see discussion in Chapter 4 – Child & Gang Homicide). Any type of social relationship between the victim and POI provides homicide detectives a starting point as to who needs to be questioned, such as a spouse, boy/girlfriend, or friends, which in turn often leads to the POI, usually one of the individuals questioned. In contrast, when a stranger murders the victim, it is difficult to identify the POI, especially if the act is random and no-one witnessed the incident.

Researchers (Addington, 2006; Litwin, 2004; Regoeczi et al., 2008; Roberts, 2007) argue that female homicides are more likely to be solved than those of males because a significant other, who is typically male, usually murders females. However, homicides committed by strangers have increased, whereas domestic homicides have decreased, which could have contributed to the national decline in clearance rates within the last 40 years (McClellan, 2003; Wellford & Cronin, 1999; Xu, 2008).

For the vast majority of homicide incidents that involve a single victim/single POI, classifying the principal relationship is relatively straightforward. However, for multiple victim and/or multiple POI homicide incidents, this process is complicated by the presence of two or more different relationships (one for each unique victim and POI pair). Of the 510 homicide incidents recorded throughout 2008–2009 and 2009–2010, 191 (37%) were classified as acquaintance homicide, 185 (36%) as domestic homicides and 66 (13%) as stranger homicide. The remaining 68 incidents (13%) could not be classified because at the time of reporting, the POI-victim relationship was not known. Of the 185 domestic homicides throughout the 2008–2010 period, 122 (66%) were sub-classified as intimate partner homicide, 22 (12%) as filicide (7 of which involved an infanticide; that is, the death of a child under 1 year of age), 20 (11%) as parricide (the act of killing one's father, mother, or other close relative) and

four (2%) as siblicide (the act of killing of a sibling or siblings). The remaining 17 (9%) were classified as "other" family homicides[19].

Compared with recent years, the number of domestic homicides has fallen. In 2007–2008, domestic homicides comprised 52% of all homicides, but comprised only 36% of all recorded homicides in 2008–2009 and 2009–2010. Further, the number of domestic homicides in 2008–2009 was the lowest recorded in more than 20 years of NHMP data collection (34%, *n* = 85). For other homicide types, the results in 2008–2009 and 2009–2010 were relatively stable when compared with previous years.

Stranger homicides were more prevalent in Queensland (21%) yet comprised between 10% and 14% homicides in all other states and territories—ranging from a low of 10% (*n* = 15) in New South Wales to 14% in the Australian Capital Territory and Tasmania (*n* = 1 and *n* = 2 respectively). Nationally, 13% were designated as unclassified cases, among which New South Wales had the highest overall proportion (21%), followed closely by Western Australia (17%). Throughout the different states and territories, Northern Territory had the lowest recorded proportion of unclassified cases (4%).

For the current two years of data collection, more than one in 10 (13%, *n* = 67) of all homicide incidents occurred during the course of, or as a result of, another crime. Of these, the most prominent precipitating offences were violent crimes such as assault (3%, *n* = 15), followed by robbery (2%, *n* = 13) and drug offences (2%, *n* =

[19] Because this classification takes into account only the principal relationship in each incident, it is worth noting that four of the 122 intimate partner homicides also involved the death of a child, while three involved the death of an acquaintance within the same incident.

11). Although not as frequent, it is worth noting that there were four homicides for which the police identified sexual assault as a precipitating offence (1%).

As previously stated almost half of all homicide incidents included alcohol consumption (*n* = 238; 47%), and of this number the majority of incidents demonstrated that both the victim and the POI had been drinking. By homicide type, alcohol consumption by the victim was more commonly recorded for acquaintance homicides (46%) than for stranger (18%) or domestic (26%) homicides. By contrast, alcohol consumption by a POI was relatively evenly distributed between acquaintance (43%) and domestic (36%) homicides[20].

Despite a slight increase in the number of homicide victims over the last two financial years, the overall national rate of victimisation has been on a downward trend since 2001–2002 and at 1.2 homicides per 100,000 persons, is currently at its lowest since NHMP was initiated in 1989–1990.

Specifically, findings for 2008–2009 and 2009–2010 show that:

- Males continued to be overrepresented as both the victims and perpetrators of offences
- Since the last NHMP annual report (2007–2008), there was a slight increase in the average age of male POIs (33.2 compared to 31.7), while the average age of female POIs has increased considerably by almost five years (37.8 compared to 33.1).

[20] The NHMP relies on toxicology reports from the coroner to determine whether the victim had alcohol in their system. It is not possible based on post-mortem toxicology screening to determine the level of intoxication, as different people metabolise alcohol at different rates and some individuals can develop a tolerance to the effects of alcohol. Nevertheless, these data are useful to indicate whether the victim had consumed alcohol and/or illicit drugs prior to the incident.

The proportion of domestic homicides has fallen considerably and has reached an historic low in recent years. It would appear that the 2007–2008 finding that 52% of homicides were domestic related was a statistical anomaly from what has otherwise been a downward trend. However, this finding may change somewhat when the victim/POI relationships in the currently unclassified cases (a higher proportion in the current reporting period than in previous years) become known. Of the domestic homicides recorded in the NHMP, the majority were classified as intimate partner homicide. The frequency of intimate partner homicides has remained stable and while, overall, female victims are not as prevalent as males, they remain overrepresented in this category of homicide.

Of all the homicide victims throughout the 2008–2009 and 2009–2010 financial years, 60 were identified as Indigenous Australians—34 males and 26 females. The rate of Indigenous homicide victimisation was four times higher than for non-Indigenous Australians, although these results varied significantly by gender. Indigenous males for example were three times more likely (4.6 per 100,000) than non-Indigenous males to be victims of homicide. Indigenous females were five times more likely (3.5 per 100,000) to be victims than non-Indigenous females.

For all Indigenous homicide victims, 55% were killed in a domestic homicide, of which the most common subcategory was intimate partner homicide (42%, n = 25). The rate of Indigenous victimisation reached its lowest point for both males and females in 2009–2010. Use of knives/sharp instruments was particularly prevalent in domestic and acquaintance homicides. For homicide victims, 49 were aged 17 years

or younger, while 38 children in the same age bracket were identified as homicide POIs. Most child homicide POIs committed the offence with at least one other POI.

Age and Sex

From its inception in 1989 the NHMP dataset shows that the victimisation rate for males has always been higher than females. It is no different in 2009-2010, as the rate of victimisation for males was 1.5 per 100,000, compared to 1.0 per 100,000 for females (Chan & Payne, 2013). This is consistent in the US (Zahn & McCall, 1999), UK (Francis et al., 2004), Canada (Statistics Canada, 2011) and New Zealand (Police National Intelligence, 2011).

The age group with the highest percentage of victims in the NHMP data was 35-49 years for most forms of homicide, constituting 26%. This variable remained consistent over a 23-year data collection period by the NHMP (Chan & Payne, 2013). The finding is consistent with UK homicide data (Francis et al., 2004), where 21.8% of victims were in the age range of 35-39 years. Authorities and policy makers in Australia already specifically target the age groups 18-35 to focus on the main catalysts for aggression, so the results for these groups suggest some success in the implementation of these initiatives. However, the continued high rate of homicide in the category 35-49 years suggests a need to focus on this group. In most countries, homicide rates tend to be lowest in the youngest ages, to peak among adults, and then decline. However, the age composition of national homicides can vary substantially.

Employment and Intoxication

Although the categories of employment, alcohol and drug use and cause of death are listed as separate categories within Strang's (1994) framework and the NHMP, due to comparatively little research in these areas, it was decided to group these together for analysis in this section as there appears to be a strong nexus with chronic intoxication (alcohol, illicit drugs or prescription drugs) and unemployment.

In terms of employment, 52% of male victims and 28% of female victims were employed at the time of the homicide incident, according to the NHMP 2008-2010 Annual Report (Chan & Payne, 2013). Facts regarding the employment status of homicide victims showed that 71% *(n* = 195) were gainfully employed at the time of their death. The difference in numbers between employed and unemployed was 42% *(n* = 83) and 31% *(n* = 61) respectively. Of the remaining numbers, 14% *(n* = 27) of the victims claimed a pension, aged or disability, and 7% *(n* = 14) were studying. Unemployment categorised by gender was roughly equivalent (male 30% vs female 33%).

Female victims were more likely to be recorded as undertaking domestic duties (6%, *n* = 11) or to have been receiving the aged or disability pension (14%, *n* = 27). Unemployment among victims was highest in the 35–49 year age group (41%), whereas employment was highest in the 50–64 year age group (54%). The final group was victims who were studying (7%, *n* = 14); none of these victims was working at the time they were formally studying (at TAFE or University), and they were all aged between 17 and 24 years.

With respect to alcohol and drugs, the NHMP data revealed that 31 female victims and 80 male victims were under the influence of intoxicating substances at the time of the homicide incident. Alcohol was recorded as the most frequently used substance amongst victims, with more males (*n* = 47) than females (*n* = 22) affected. The use of both alcohol and illicit drugs by male victims had increased over the past decade, up to the year in review 2007-2008. In contrast, the use of both alcohol and illicit drugs by female victims remained relatively stable at 4% and 5% respectively for the same period.

Ethnicity

The following graph illustrates the trends in homicide victimisation across Australian States and Territories. The sudden and substantial increase in the number of homicide victims in Tasmania in 1996 is attributed to the Port Arthur massacre.

Figure 4. Homicide incidents by jurisdiction, 1989-90 to 2011-12 (rate per 100,000)[21].

The anomalous peaks shown for the Northern Territory can be attributed to the large population of Indigenous persons residing in this area who have a

[21] Note. Data sourced from NHMP annual reports (Bryant & Cussen, 2015; Chan & Payne, 2013; Dearden & Jones, 2009; Virueda & Payne, 2010).

disadvantaged background and therefore a higher concentration of factors which put them at greater risk of being a victim of homicide (Mouzos & Seagrave, 2004). Research from the AIC shows that Indigenous Australians account for a disproportionately high number of both victims and POIs of homicide (McLaughlin, 2001). Although Indigenous Australians represent approximately 2% of the total Australian population, they accounted for 15.1% of homicide victims and 15.7% of homicide POIs over the 11-year period between July 1989 and June 2000. The rate per 100,000 for homicide victimisation of Indigenous persons fluctuated between 12.6 and 13.8 in the early 1990s. By contrast, the non-Indigenous homicide victimisation rate has remained between 1.3 and 1.8 per 100,000 over the same 11-year period (Mouzos, 2001c).

If an individual identifies as an Aboriginal or Torres Strait Islander, they are categorised in the NHMP dataset as Indigenous. In 2009-2010, there were 38 victims listed as Indigenous, which constituted 14% of the national total. No Indigenous victim was killed by someone unknown to them; in fact, 68% of the victims were killed in a domestic dispute (n = 26), others were killed by an acquaintance (n = 10). There were two victims where the victim/POI relationship was not recorded by police (Chan & Payne, 2013). As in many other fields in the Australian Criminal Justice System (CJS), Indigenous people are overrepresented as victims of homicide. However, there are similarities with non-Indigenous victimisation, such as females making up the majority of domestic related homicide events. Females account for

more than half of all homicide victims (*n* = 22) in 2009-2010, whereas males only number 16 victims (AIC, 2010, p. 22, emphasis added by researcher):

> In 2007–08, there were approximately seven Indigenous homicide victims per 100,000 of the Indigenous population (8 per 100,000 for women and 6 per 100,000 for men). This is *seven times higher than the equivalent victimisation rate for non-Indigenous Australians* (1 per 100,000).

Not unlike non-Indigenous homicide incidents, domestic homicides are the most common type in Aboriginal and Torres Strait Islander communities (AIC, 2010). Sixteen Indigenous females (73%) were victims of domestic homicide in 2009-2010; this number has been increasing over the past four years of collection and contrasts with the decline in the national number of domestic homicides (AIC, 2010). Rates of male victimisation in Indigenous communities for the period in question declined.

Historically, prior to colonial contact, most conflict resolution within the Indigenous communities was structured in tradition and occurred at sacred places. Fighting behaviour was controlled by elders and was carried out according to social rules in response to specified offences. Violence was thus a form of institutionalised conflict resolution. (Thomson, 1935; Craig, 1979; Langton, 1988; as cited in Memmott et al., 2001). While it is essential to any analysis of Indigenous homicide that a full understanding of the cultural contexts in which violence occurs be understood and stated, it is also important that this does not obscure other aspects of violence, particularly the destruction of individuals, families and communities that has reached epidemic proportions in some places (Mouzos, 1999b). It is thus arguable that whereas some forms of violence may provide acceptable avenues for conflict

resolution as they did in traditional times, these forms are discernible and definable by their limits and rules, a level of constraint, often supervised, and most probably in the absence of alcohol.

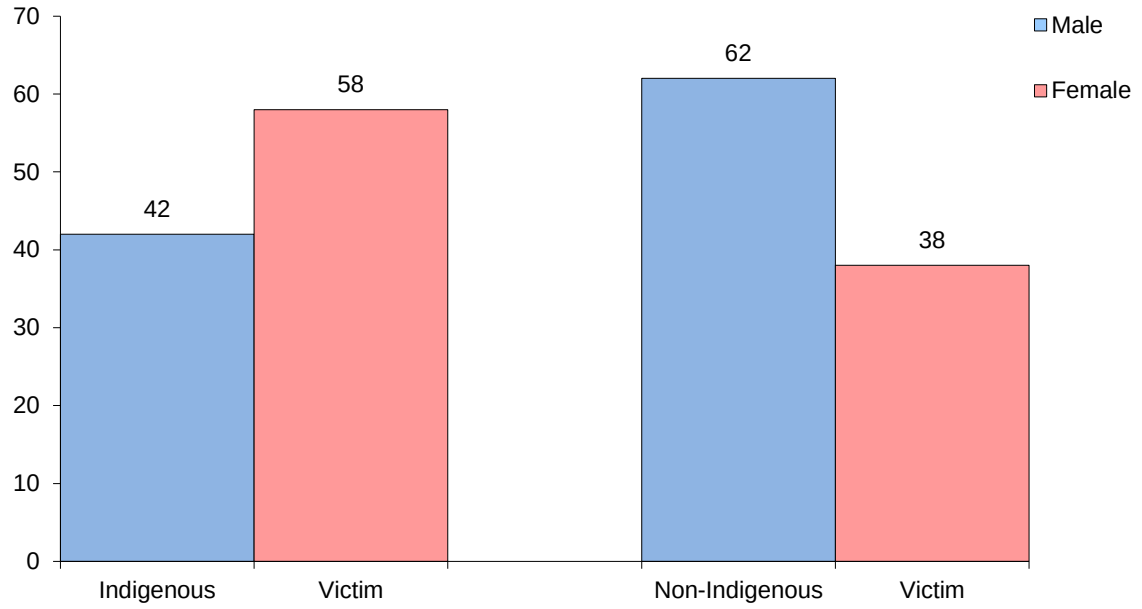

Figure 5. Homicide victim Indigenous status by gender 2009-2010. Source: National Homicide Monitoring Program, 2010.

Both the US and the UK data are similar to the NHMP findings. In the UK, 77.8% of recorded victims were Caucasian, 7.4% were African decent and 6.8% were Asian (the Indian sub-continent or other). Although at first glance this data seems to indicate that the Caucasian population is more often the victim of crime, closer inspection of the data reveals that the non- Caucasian population of England and Wales constitutes merely 2.8% of the total population. Therefore the non- Caucasian population is overrepresented as victims in the same way as Aboriginal and Torres Strait Islander peoples are in Australia.

Victim-Offender Relationship

Violence is expressed in a range of different ways. Historically, violence has been artificially compartmentalised and as a result, has inaccurately reflected the complex interplay of these different forms. The compartmentalisation of violence historically has been due to three main factors. Firstly, a patriarchal government, which formulated and implemented policy that assumed domestic violence (for example) was private business between those involved. Secondly, an inability of the authorities to determine overall causation of the violence, so it was broken down to legal charges, such as sexual assault, domestic violence, and sexual harassment. Thirdly, an overall public acceptance that "boys will be boys", therefore accepting antisocial behaviours such as binge drinking, social illicit drug usage and peer group behaviours (including violence against women). Violence can be physical, psychological, cultural or social, all of which may be perpetrated in the one act (Department of Premier and Cabinet, 2001).

The relationship between gender and risk of victimisation is complex. Violence and the consequent victimisation of women is pervasive in Australian society, afflicting women from all ages, cultures, classes and backgrounds (Lloyd, 1997). Empirical evidence demonstrates that women are at greater risk of violence at the hands of someone they know and in the context of a home than by a stranger or in public (Mouzos, 2003). Research has shown that females are more likely than males to kill and be killed by acquaintances (Browne & Williams, 1993; Browne et al,. 1999).

The majority of POIs that perpetrate violent behaviour against women are men (Chan & Payne, 2010). Victims of sustained violence often suffer with adverse health issues, loss of income due to absence from work and long-standing complex mental health problems, including low self-esteem, as can be seen in policy papers released by Carnegie Council (2004, p. 1):

> Violence against women is as serious a cause of death and incapacity among women of reproductive age as cancer, and a greater cause of ill-health than traffic accidents and malaria combined. Violence against women is a prevalent harm to the basic rights, freedoms, health and welfare of women. It occurs in many settings and at many hands, including those of relatives, acquaintances, employers, and the state.

The majority of recorded homicides were domestic in nature in 2009-2010, where the victim(s) had a relationship with the POI. This is a common trend internationally. Intimate partner homicides comprised the largest proportion of domestic homicides at 52% (n = 134) and approximately 16% of the total homicide victims in Australia were children under the age of 17 years. Of the total number of homicides in 2009-2010, 43% had a domestic-violence history with the police in some form prior to the homicide incident. Homicide incidents recorded as acquaintance homicides are numbered as 79, or 30% of the total number. Stranger homicides were 12% (n = 30), an increase since the last reporting year 2006-2007. The remaining homicides are not classified; this occurs when the victim-POI relationship is unknown or not recorded by investigating officers or when the homicide incident is unsolved (7%, n = 17).

Motive

Ultimately, one of the main lessons learnt within this research has been that motivation informs risk, both from the victim's perspective and that of the POI. However, the Computer Operated Policing System (COPS) data showed that motive was only recorded in 44% of homicide cases. All motivated parties within a homicide, have a conscious imposition of risk even when there is a disjunction between the premise and the conclusion.

Of those cases where motive was recorded, the results illustrate that the motive is the alleged primary causal factor that precedes the homicide. Excluding cases with no apparent motive, female victims of homicide are overwhelmingly most likely to have been killed as a result of a domestic argument and/or the breakdown of a relationship. Male victims are more likely to have been victimised and died where motives were linked to revenge, money/drugs, and alcohol related arguments. The study examined the correlations between victim/offender relationship and motive, where relationships were divided into primary and secondary categories. A primary relationship was defined as a sexual intimate, a blood relative, or a friend; whereas secondary relationships included acquaintances and strangers. Motives were classified as sexual dispute, argument, revenge, or financial gain. A significant correlation was found between victim/offender relationship and homicide motive. Further research is required of the interactions between homicide victim/offender relationship and motive, weapon selection, and number of injuries inflicted.

Victim-POI Relationship

In general, most homicide incidents in 2008-2010 were domestic in nature, involving one or more victims who shared a family or domestic relationship with the POI. Intimate partner homicides comprised the largest proportion of domestic homicides (60%). The victim-POI relationship is considered more significant to case clearance than even the rational nature of the homicide, investigator experience or workload, weapon used, race of the victim, or number of victims involved. Non-felony murders (equate to manslaughter in NSW) often involve acquaintances or family members, may occur after long-term arguments, and frequently are witnessed by individuals familiar with long-standing tensions between the victim and POI (Marché, 1994).

Costs of Homicide

Even though levels of homicide in Australia are comparatively low in the global context, costs to the government, citizens and nation overall are estimated to exceed $930 million per annum (Mayhew, 2003). This cost can be broken down into categories such as medical costs, legal expenses, and lost earnings. Medical costs associated with homicide are estimated at $7,600 per victim, or a total of $4.5 million per annum, with lost earnings accounting for the greatest proportion of the total cost. For example, it has been estimated that a victim 15-24 years of age would, due to lack of productivity, cost the nation approximately $1.6 million (Mayhew, 2003).

Homicide Victims' Support Group (Aust) Inc. (2012) suggested that another major expense was the intangible losses that cannot automatically be equated with a monetary value. These losses would include, among other things, quality of life for

secondary victim's post-homicide, emotional trauma and post-traumatic stress. Each of these traumas carries a concomitant cost with respect to counselling, loss of income due to absence from work, and other costs associated with reconstructing their lives. The total cost of intangible losses is estimated at approximately $225 million overall per annum (Mayhew, 2003).

To mitigate these costs, it is justifiable to spend money solving these crimes. However, the realities of funding mean that *unlimited* resources are not available to police. Management decisions are influenced by pressure from the media, the public and politicians (Mitchell, 1991). The need to produce results requires the most effective use of limited resources. Any aspect of a crime that could be used to improve clearance rates becomes important. One aspect that adds value is identified solvability factors that help manage the prioritisation of cases. Indeed, as stated by Fyfe and colleagues, "The development of 'solvability factors' is considered one of the more important developments in modern policing" (Fyfe, Greene, Walsh, Wilson, & McLaren, 1997, p. 192).

Types of Homicide

There does not appear to be any universally agreed method for classification of homicides (Harries, 1997). Most classifications include a focus on qualitative variables, such as prior victim-offender relationship or precipitative events, as opposed to those based on specific quantitative measures, such as the total number of victims (Wellford & Cronin, 1999). Additionally, the triangulation of various characteristics related specifically to the victim, offender and incident can cause

difficulties in developing homicide typologies (with the exemption of specific legal definitions that may vary across different jurisdictions, an example being infanticide).

Although there are a range of reasons why people kill each other, most events can be classified into one of three categories. Therefore, in this thesis, the homicide events are organised into three main groups according to the principal relationship shared between the victim and the POI. These categories are:

- Domestic/intimate homicides: This type of homicide is known as the 'self-solver' and usually the simplest to investigate (Innes, 2003). The definition of "domestic relationship" was taken from the *Crimes (Domestic and Personal Violence) Act 2007*[22]. The Person of Interest (POI) usually knows the victim and there is, in

[22] Section 5 Meaning of "domestic relationship".
For the purposes of this Act, a person has a "domestic relationship" with another person if the person:
(a) is or has been married to the other person, or
(b) has or has had a de facto relationship, within the meaning of the *Property(Relationships) Act 1984*, with the other person, or
(c) has or has had an intimate personal relationship with the other person, whether or not the intimate relationship involves or has involved a relationship of a sexual nature, or
(d) is living or has lived in the same household as the other person, or
(e) is living or has lived as a long-term resident in the same residential facility as the other person and at the same time as the other person (not being a facility that is a correctional centre within the meaning of the *Crimes (Administration of Sentences) Act 1999* or a detention centre within the meaning of the *Children (Detention Centres) Act 1987*), or
(f) has or has had a relationship involving his or her dependence on the ongoing paid or unpaid care of the other person, or
(g) is or has been a relative of the other person, or
(h) in the case of an Aboriginal person or a Torres Strait Islander, is or has been part of the extended family or kin of the other person according to the Indigenous kinship system of the person's culture.
Section 6 Meaning of "relatives"
For the purposes of this Act, a person is a "relative" of another person (the "other person"):
(a) if the person is:
(i) a father, mother, grandfather, grandmother, step-father, step-mother, father-in-law or mother-in-law, or
(ii) a son, daughter, grandson, grand-daughter, step-son, step-daughter, son-in-law or daughter-in-law, or
(iii) a brother, sister, half-brother, half-sister, step-brother, step-sister, brother-in-law or sister-in-law, or
(iv) an uncle, aunt, uncle-in-law or aunt-in-law, or
(v) a nephew or niece, or
(vi) a cousin, of the other person, or
(b) where the person has a de facto relationship, within the meaning of the *Property (Relationships) Act 1984*, with somebody else (the "person's partner") — if the other person is:
(i) a father, mother, grandfather, grandmother, step-father or step-mother, or
(ii) a son, daughter, grandson, grand-daughter, step-son or step-daughter, or
(iii) a brother, sister, half-brother, half-sister, step-brother or step-sister, or
(iv) an uncle or aunt, or

most cases, a clear motive. Police have often recorded previous domestic disturbance involving the victim, and the homicide event is the fatal result of violence committed on a continuum. In some cases, domestic homicides can also be co-committed with rape or theft. There have been cases where the POI attempted to distance themselves from the crime and 'staged' the crime scene to appear as though another, unknown POI had committed the offence, such as in the cases of Wennerbom or Gonzalez (see Leneghan-Britton v Taylor, 1998; Gonzalez v Director of Public Prosecutions, 2003)

- Acquaintance homicides: These homicides are historically more difficult than domestic homicides to solve. An example of this type of incident is a violent death that arises as a result of a brawl in a public drinking house (e.g., pub). The incident usually stems from a verbal stoush under the influence of alcohol or illicit drugs and has "loss of face" in front of peers as a contributing factor (Polk, 1994). These homicides are more difficult to solve than intimate homicides, because the victim and the POI may not be fully acquainted with each other. From an investigator's perspective, there can be the advantage that independent parties in areas where Closed Circuit Television (CCTV) is present often witness these types of incidents, or witnesses record the event on their mobile phones
- Stranger homicide: Unlike acquaintance homicides, which generally start with personal conflict between the POI and victim, stranger homicides often have no discernible relationship, reflected in the title of typology. Stranger homicides

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(v) a nephew or niece, or
(vi) a cousin, of the person's partner.

sometimes involve a co-committed crime that required extensive planning, such as a robbery/homicide. These types of crime are usually premeditated, with forensic awareness in some cases, so that the likelihood that physical evidence will be left behind for investigators to discover is decreased, reducing the potential of identifying a POI. In a stranger homicide, the POI usually commits the crime in secrecy, without witnesses, thereby thwarting investigative effort in obtaining evidence. Many of the stranger homicides in the NSW Police data set have no obvious motive recorded, unknown crime scenes (where the victim's body is dumped and the initial place of the violent attack is not known) and no obvious nexus between the victim and the POI. Police have to rely heavily on information gleaned from the public; when little or no information is forthcoming, the homicide can remain unsolved. An example of stranger homicide is the case of Ivan Robert Marko Milat, who murdered seven backpacking holidaymakers who were all strangers to him, killed over a number of years and targeted in different locations (R v Milat, 1996).

Why the Types and Numbers of Homicide Are Changing

Research about specific aspects of homicide investigations and whether police investigators clear cases offers some reasons for why homicide rates increase or decrease over time (Riedel & Jarvis, 1998). Litwin and Xu (2007) and Xu (2008) argue that alterations in the kind of homicides that occur, the number of cases and the quality of police investigators have a direct effect on homicide clearance rates. For example, homicides that are gang-related, involve the use of guns or drugs, and

those that occur between strangers are far more difficult to solve than homicide events occurring between people who share a pre-existing relationship. Therefore, it can be said that an increase in these types of homicide events will directly correlate to a decrease in clearance rates (Geberth, 2006). Likewise, police interviewing a witness to a homicide who is happy to assist the investigation is a key predictor to increasing homicide clearance rates (Keel, Jarvis, & Muirhead, 2008; Riedel & Jarvis, 1998; Riedel & Rinehart, 1996; Wellford & Cronin, 1999). Other examples are homicide events that are committed with weapons that require more personal contact (such as a sharp or blunt object) and homicides with known motives (such as jealously or sexual domination) are also considered easier to solve due to the forensic nature of the event (Wellford & Cronin, 1999).

The number of stranger homicides has increased in the US over the past 30 years and altered the ratio of domestic homicides to stranger homicides (Fox & Zawitz, 2011; McClellan, 2007; Regoeczi & Miethe, 2003; Wellford & Cronin, 2000). Additionally, many of the stranger homicides are drug-related and have been cited by scholars (Regoeczi & Miethe, 2003; Wellford & Cronin, 2000) as the most difficult homicide cases to solve due to the impersonal nature of these cases, thus resulting in a challenge in identifying the POI(s). Other factors that affect clearance rates include unwilling witnesses due to the fear of intimidation, a lack of positive community relationships with law enforcement and a general and pervasive distrust of police (Richardson & Kosa, 2001). Jarvis states that stranger homicides have decreased (Jarvis, 2013). More research is required on this topic due to the fact that there was

an apparent increase in the percentage of acquaintance and stranger homicides in the COPS data up to 2013.

Wolfgang's seminal work (1958) argued that the construction of communities, both in socio-economic and cultural terms, is based upon dichotomous categorisations, which can give rise to conflict. Smith and Zahn (1999) argued that the motives for, and the commission of homicide have not altered substantially for centuries except that, over the previous 20 years, there has been an increase in stranger homicides in some Western countries. More recently, Pinker (2011) has proposed five reasons for the reduction in rates of homicide, which he argues have declined steadily over the centuries of human existence. He suggests that the coercive power of a benevolent state imposing law and order provides a framework for life to shift from purely survival to an environment that allows scope for society to develop. Commerce can then occur which promotes interdependency, discouraging aggressive violence between neighbours. The status and treatment of women improves, which leads to feminisation of society (Pinker, 2011 p. 684) that honours the gentler values and diverts away from hyper-masculine social values. He argues that these societal values then have a pacifying force where the power of reason slowly expands to overcome prejudice, hatred and the right of might, producing a better society where people apply the principles of reason in their interpersonal dealings, which he terms the "escalator of reason" (p. 686).

Methodology

Devine and Heath (1999) state "the choice of methods - the means by which the research actually gets done - shapes the substantive findings which emerge" (p.2). With this in mind it is important for researchers in criminology, and its related fields, to decide on the most appropriate method to support their research.

An example of qualitative research in the field of sociology and criminology is *Investigating Homicide: Detective Work and the Police Response to Criminal Homicide* by Martin Innes (2003). Innes (2003) seminal research incorporated ethnographic, anthropological, fieldwork and although remaining an objective researcher he embedded himself as a participant observer researcher with the Metropolitan Police in the United Kingdom. This research was purpose driven to seek answers in the field, using access to police and their investigations as well as some access to datasets and statistical analysis. The aim of the type of method Innes (2003) used was a comprehensive description of the human experience.

The current study mimicked certain sections of Innes (2003) work (qualitative survey Chapter 4) and in this chapter the quantitative data analysis. This part of the research sought to find answers in data sets, patterns and statistics. It classified, counted and constructed a statistical model, via categorical regression, in an attempt to explain what was observed (Salomon, 1991). The quantitative method is a wholly objective instrument, which obtains precise measurements and subsequent analysis of the data. This quantitative research involved analysis of numerical data; measuring variables, their interactions and the subsequent comparisons between the dichotomous categories – solved and unsolved.

The main critique of the quantitative method is that even though data collection is, overall less time consuming than qualitative interviews and it is able to test hypotheses, it completely overlooks related and contextual aspects. Researchers tend to remain objectively separated from the subject matter and are unable to grasp the 'why' questions. To overcome this criticism this thesis was designed on a mixed-method approach.

Inherent limitations to the quantitative approach are countered by its many advantages. Firstly, the data is gathered in an objective manner, which allows for controlled measurement, according to stringent guidelines (Mouzos, 2002b). Secondly, the data is replicable and thus reliable because the controlled measurement assumes a stable reality (Chan & Payne, 2013). Finally, nomothetic generalisations can be made based on the results because the quantitative approach allows for a large portion of the population to be sampled (Kumar 1996; Nunan, 1992).

Police data is the timeliest; given their early involvement in each case and the requirement that they record numbers of homicide victims each year in published police annual reports. This means the accuracy and quality of police-obtained data, generally more superior to any other source. Wolfgang (1967) argued that police data is the most appropriate source of official information. In reference to the method employed in his own study, he stated:

> Four major sources of data were available for analysis of criminal homicide: police records, coroners' reports, court and judicial records and records of

> prison commitments. Police records have been utilized in the present study because richness of descriptive detail and procedural proximity to the crime eliminate many defects and limitations of other statistical sources (Wolfgang, 1958, p. 11).

The police perspective is essential and the information they record will always be the most complete in terms of numbers, given that it is the police who define whether or not a homicide has taken place (Geberth, 1996). Therefore, the knowledge, understanding, and use of police statistics and databases are imperative to academia and speciality police units, to inform both on-going theoretical and applied work. There are several possible sources of data regarding homicide offences in Australia that could have been used in this thesis. Besides data from the Australian Bureau of Statistics (ABS), there are state and territory police records, as well as important and often more detailed information collected by prosecution authorities, coronial offices and the courts. There are problems with the collection of the national data on homicides that have impeded systematic research, as noted by Smith and Zahn (1999). Definitions differ among states and territories, with jurisdictional legal nuances; for example, vehicle deaths are included in homicide numbers in South Australia (SA) where the driver is found liable whilst driving under the influence of drugs or alcohol, whereas other states and territories in Australia do not include this type of death in their homicide numbers.

The two primary sources of publicly accessible homicide data in Australia are the NHMP and the ABS. These datasets are valuable for aggregate *descriptive* statistics of homicides, for example, gender of the victim and POI, ethnicity, location of death, number of victims and POIs in the incident, weapons used, and relationship between victim and offender, to name a few. However, the ABS does not specify whether the case is/was cleared and how this was achieved; it therefore lacks the investigators' perspective or input.

The NHMP is a vital asset providing continuous precise, current and historic data relating to homicide trends and patterns in Australia. The program's success and viability is possible due to the continuous support of the Australian Police Ministers' Council and the ongoing cooperation of eight state and territory police services (Mouzos, 1999a). One of the main reasons that the NHMP records were selected for inclusion in this thesis was that there were sufficient comprehensive data to illustrate short-term changes in the context of longer-term trends. Due to the fact that the dataset includes very specific factors relating to homicide events over a 23-year timeframe, it provided an established set of factors that show what has remained constant, and in contrast, what has changed in relation to homicide events, methods, and motivation.

Therefore this section of the thesis was conducted using a quantitative statistical analysis of NSW Police Force data, provided to and quality assured by the National Homicide Monitoring Program (NHMP). The data was examined to answer the main research question of whether there are any extra-legal or

evidentiary factors that are statistically significant in solving a homicide and thus increasing case clearance. More specifically, an analysis was conducted using data on 300 homicide records from 1994-1995 to 2005-2006 obtained from the NHMP. The benefit to secondary analysis using a quantitative methodology is that categorical regression analysis can be employed to determine the independent effect of factors that influence homicide solvability while controlling for a number of empirically important case level variables.

Given the nature of the data set a qualitative analysis was not considered as the database from which it was obtained had quantified all of the collected materials from the various crime events reported. Whilst criminal and forensic social sciences are known to use qualitative analysis extensively as a means of obtaining in depth narratives about crime and the criminal experience (whether victim or offender); to be effective as a tool for predicting solvability, criminal perpetration, or the likelihood of becoming a victim, the data must ultimately be collected as, or translated into, a quantitative structure.

Method

Validity, Reliability and Sustainability of NHMP Dataset

The NHMP has two main sources of data: offence records obtained from each State and Territory police service[23]; and State Coronial records, such as toxicology and post-mortem reports. Not all data fields are complete when collected by the NHMP, so sometimes, when required, media monitoring reports and staff from the

[23] Supplemented, when necessary, with information supplied by the investigating officers.

homicide squads are used to track down missing information, such as from Briefs of Evidence (BoE) or directly from the Officer in Charge (OIC) of the matter. Without this information, the datasets would be incomplete, compromising research options and restricting understanding of individual homicide cases and therefore, the quality of identification of trends in homicide over time.

The NHMP database has information divided into four key areas:

1) An incident file, which describes the case and its circumstances (e.g., location, date and time of the incident, status of investigation and whether the incident occurred during the course of another crime)
2) A victim file, which contains socio-demographic information relating to the victim(s), details of the cause of death and the type of weapon used to kill the victim(s), and alcohol and illicit drug use[24]
3) An offender file which details persons who have been charged and includes data on the socio-demographic characteristics of the offender, their previous criminal history, alcohol/illicit drug use, mental health status and relationship to the victim (within the NHMP, the term *offender* refers to suspected offenders only, and not to convicted persons, unless otherwise stated)
4) A merged incident, victim and offender file, combining details from all three datasets. (Chan & Payne, 2013, p. 2)

[24] Rates used within the NHMP publications have been calculated using the latest population data from the Australian Bureau of Statistics.

Finally, the NHMP is subject to a meticulous quality-control process that guarantees the accuracy of the data supplied to stakeholders and appears within official publications. This involves crosschecking information contained in each police offence record from additional data sources[25]. Any discrepancies identified are queried with police to verify the circumstances, and dependent on the reliability of the additional source of information, the data may be updated accordingly (Mouzos, 2002c).

The NSW Police data, known as Computer Operated Policing System (COPS) would have been the first choice for data, however, when attempting to interrogate this data, it was found that the very specific information required for complex statistical analysis on the nature of the investigations was unavailable, as not all fields were populated and therefore could not be statistically analysed. Examples of this included:

- Miscategorisation – miscellaneous, unknown entities
- Lack of update change, that is, showed *cleared* when case went to court, POI was later acquitted and the case was returned to unsolved squad, but record still shows as *cleared* (Refer Case Number SH013MOO)
- Case specifics are often in the narrative field, that is, victim was a prostitute, not identified in employment field; consequently, a search of every case narrative for crime/case nuance was required to identify details.

[25] Supplementary sources include post-mortem coronial reports and information provided by other agencies, such as: statistical services, homicide squads, firearms registries and press clippings.

Therefore, the datasets did not offer sufficient information to allow for an accurate interpretation of the investigation or clearance process. It appears that this situation is no different in the US, with neither the Uniform Crime Reports (UCR) nor Supplemental Homicide Reports (SHR) offering sufficient information on the clearance of cases (Maxwell, 1989). A revised data collection form for NHMP consisting of 77 variables was piloted in NSW and Victoria in early August 2004[26]. Some of the variables that the NHMP collects are listed in Table 2.

[26] Personal correspondence with NHMP staff, October 22, 2012.

Table 2.
Variables Collected and Recorded by the National Homicide Monitoring Program (NHMP)

Age	Alcohol intake
Cause of death	Drugs involved
Employment	Employment status at the time of the incident
Evidence of drug involvement	Gender
Illicit/prescription drug use and drug type	Incident involve a firearm
Incident location (home, park, etc.)	Incident occur in the course of another crime
Incident status	Initial charge
Marital status	Motive
Postcode of incident	Prior criminal history
Racial appearance	Relationship - domestic, acquaintance or stranger
Type of crime	Type of drugs involved
Type of violence employed	Victim killed by a mentally disordered offender
Weapon used in incident	Year of incident [27]

In selecting the NHMP data for this thesis, there were other factors for consideration beyond the question of detail. Primarily, it was the comprehensiveness and reliability of the data. The NHMP methodically scrutinises and checks every record sent from the police agencies it deals with, for arithmetical exactness and for deviations that may occur from year to year in crime data, which might indicate errors (Mouzos, 2002). In order to avoid misinterpretation of the trends and data, it was important that a consistent data source was used. The NHMP staff:

[27] Similar statistics will be collected for the POIs - if known.

> compare aggregated data from agencies of similar population size to identify any unusual fluctuations in an agency's crime counts or reports. Large variations in crime levels may indicate modified records procedures, incomplete reporting, or changes in jurisdictional boundaries (Mouzos, 2002b, p. 6).
>
> In contrast to assault, homicide is a crime that seldom goes unreported.

Therefore, recorded numbers are considered to be very accurate (Chan & Payne, 2013). Wolfgang (1967) argued:

> It is almost axiomatic in criminal statistics that for purposes of determining the amount and type of crime committed in the community, police statistics yield the most valued data. Too many cases are lost through court trials to use court statistics, and to use prison data means a still further reduction of cases that are highly selected to result in incarceration instead of probation or some other form of disposition. For this reason, police statistics were used to obtain the most valid picture of criminal homicides. (p. 17)

Consequently, it was determined that the best source of data to use in this section was NHMP's Aggregate Data (AD), which are data that have been quality assured by the NHMP so that the public can use it without identifying the victims, incident or (if known) the offender.

The present study sought to identify the variables that affect homicide solvability in New South Wales. Specifically, it investigated the impact of victim characteristics year and location of the homicide event, use or presence of drugs or alcohol, cause of death and changes in homicides over time - when recorded as "solved" meaning that the Person of Interest was arrested, charged and found guilty in court – making them the 'offender', or when the homicide was recorded as a murder–suicide.

Independent Variables

The value of receiving the NHMP dataset was in being able to apply secondary analysis and a quantitative methodology by selecting a categorical regression analysis to verify the independent effects of solvability factors whilst regulating a number of empirically key variables. One of the main shortcomings regarding the secondary analysis is that the researcher had to rely on the variables the NHMP chose to provide. Although the NHMP dataset contains 77 variables per case, not all are recorded consistently and others are subject to caveat, so are not available for research. A review of literature and the data supplied by the NHMP determined which variables may predict homicide solvability. Each of the variables selected for the chi-square analysis can be viewed in Table 4 there are 33 variables in total. The chi-square test of association revealed 12 variables justifying additional examination.

Data

The unit of analysis for this part of the thesis are the homicide cases and data reflecting information on homicides that occurred in the state of NSW, for the years 1994 to 2005. An application was made to the NHMP to gain access to New South Wales homicide data for the period 1994-2005. However, not all homicides reported to NSW Police within this timeframe are included in the sample. The selection criteria were set so that every case within this section of the thesis must:

- Involve a *proven* homicide (i.e., a body or a victim's head was found)
- Have occurred within the state jurisdictional boundaries of NSW
- Be a case that has only one victim per incident, and
- Have been assigned to NSW Homicide detectives between July 1, 1994 and July 31, 2006.

Of the cases meeting the inclusion criteria, 152 cases were unsolved. One hundred and fifty of these unsolved cases were randomly selected for inclusion in the analysis. Five hundred cases were identified as both solved and meeting all inclusion criteria. From these, a further 150 cases were randomly selected and included in the sample to be analysed (*N*=300).

These cases were processed through the Statistical Program for Social Sciences (SPSS) software (version 23) for a categorical regression. The purpose of this analysis was to discover whether any variables from the NHMP dataset carried any predictive weight in relation to solvability. These variables are referred to hereafter as *solvability factors*, signifying their purpose and potential within a homicide

investigation. To ascertain whether case solvability can be predicted, it is important to understand and examine the relationship between variables. Cross-tabulations were initially run between the dependent variable (solved case) and each of the independent variables (See Table 4). A chi-square test for association determined whether there was a significant difference between the effect of two categorical independent variables on a categorical dependent variable and whether the probability that the observed frequencies across a set of categories were significantly different from the expected frequencies (Vito & Blankenship, 2002).

Reasons for Inclusion of Variables in Chi-Square Test

Changes in homicide solvability over time and location of where the offence occurs have also been included in this study. Bryant and Cussens (2015) presented research that indicated that the location of the homicide incident was directly related to case solvability. Homicides committed within a private residence are more likely to be solved (Bryant and Cussens, 2015; Mouzos and Muller, 2001; Wellford and Cronin, 2000) than those committed in a public venue (Litwin, 2004).

Previous research documents numerous circumstances that may account for case solvability, for example: motivation (Block & Block, 1991), victim-offender relationship (Block & Block, 1992; Mouzos & Rushforth 2003; Wolfgang, 1958), how the incident occurred (Bryant & Cussens 2015; Salfati, 2003; Brown et al., 1999), and the homicide occurring within the course of another crime (Mouzos and Muller, 2001; Salfati, 2000; Salfati & Haratsis, 2001). All of these characteristics are recorded

by the National Homicide Monitoring Program (NHMP) therefore the following data was included in the testing:

1. incident location
2. homicide within the course of another crime
3. evidence of drug involvement
4. weapon, if applicable.

A homicide that occurs within another crime, especially sexual offences and robbery, has shown to decrease the chances of clearing a case (Salfati, 2000; Santilla et al. 2001). Salfati (2003) posits that POI's in these cases are more forensically aware and organised in their approach to the crime. The relevance and apparent importance of this 'variable' supported its inclusion in this study and analysis.

Extant research, in relation to victim characteristics, demonstrates that there have been mixed findings internationally on which variables can positively influence case solvability. For the purposes of this study sex, age, race, employment status, marital status, alcohol or drug use (at the time of incident, determined through post-mortem examination), criminal history, whether the victim employed violence and their ultimate cause of death are included for analysis.

Research illustrates that females are more likely to be killed by someone known to them (Eriksson and Mazerolle, 2013; Gannoni and Cussen, 2014; Stöckl, Devries, Rotstein, Abrahams, Campbell, Watts and Moreno, 2013), in that a relationship of

some sort exists or existed. It is therefore, critical to include the sex of the victim and their marital status.

Age of the victim has been found to directly affect positive case clearance (Mouzos and Muller, 2001; Ponce et al., 2007). In homicide cases where the victim is under the age of 30 years, it is more likely for the case to be solved than those with older victims (Mouzos and Muller, 2001). Therefore, the variable 'age' was included to test.

The other variables, race (Martinez, Iwama and Stowell, 2015; Messner, Beaulieu, Isles and Mitchell, 2014), employment status (Bryant and Cussens, 2015; James and Daly, 2012), alcohol or drug use (Kuhns, Exum, Clodfelter and Bottia, 2014; Miles, 2012; Sturup and Lindqvist, 2014), criminal history (Ganpat, Liem, van der Leun and Nieuwbeerta, 2012; Swogger, Walsh, Christie, Priddy and Conner, 2014), whether the victim employed violence (and, if so what type of violence) (Hunt, 2014; Muftić, and Hunt, 2013; Smith, and Bouffard, 2014).

Victim's 'Cause of death' (COD) is directly linked to case solvability (Ponce et al, 2007; Salfati, 2000, Wellford and Cronin, 2000). This variable is specifically linked to whether a weapon was utilised and the type of wounds inflicted by the POI. This data are routinely collected by the NHMP and is included in the chi-square test.

Three variables that were identified as significant in chi square model were purposefully excluded from the categorical regression, they were: Incident status (<.001), victim employed violence (<.001), and offender's mental condition (<.001).

These variables were excluded from the analysis as the data reporting methods for these variables resulted in some corruption of the data.

Resulting from this first analysis, specific variables were identified warranting additional testing as predictors of solvability. Each of the variables was coded as nominal; therefore, a categorical logistic regression analysis was used. Logistic regression is different from chi-square analysis as it is able to predict group membership (dependent variable) from a group of predictors (independent variables), instead of just ascertaining that a relationship exists between the observed and expected incidents (Mertler & Vannatta, 2005; Tabachnick & Fidell, 2001). Explanatory variables were chosen on the basis of the results in Table 4. The final model, whose estimated regression coefficients are shown in Table 5, resulted from a process of variable selection that began with age, gender, racial appearance and employment status of victims as the first block of regressors. According to Messner and Tardiff's (1985) approach, these variables measured socioeconomic characteristics associated with the routine activities of victims and offenders.

Analysis - Categorical Regression

Categorical regression was used to evaluate the ability of a model containing homicide and victim characteristics to predict the solvability of the crime. Individual predictors were selected for the categorical regression equation if the relationship shown by the v2 value was significant (Hosmer & Lemeshow, 2000). To control multicollinearity, predictors were only entered into the regression equation if they were correlated with other predictors. Where a larger correlation existed, one

variable of the pair was chosen for inclusion based on greater investigative utility. A categorical regression was performed to ascertain the effects of age, gender, employment status, marital status, drug and alcohol intoxication on the likelihood that the homicide would be solved and change in the number of homicides solved over time as predictors.

Results

To ascertain whether case solvability can be predicted, it is important to understand and examine the relationship between variables. Cross-tabulations were initially run between the dependent variable (solved case) and each of the independent variables (see Table 4). A chi-square test for association determined whether there was a significant difference between the effect of two categorical independent variables on a categorical dependent variable and whether the probability that the observed frequencies across a set of categories were significantly different from the expected frequencies (Vito & Blankenship, 2002).

From this first analysis, specific variables were identified warranting additional testing as predictors of solvability. Each of the variables was coded as dichotomous; therefore, a categorical regression analysis was used. Categorical regression is different from chi-square analysis as it is able to predict group membership (dependent variable) from a group of predictors (independent variables), instead of just ascertaining that a relationship exists between the observed and expected incidents (Mertler & Vannatta, 2005; Tabachnick & Fidell, 2001).

TABLE 4

Pearson's Chi Square and p Value

Name of variable	Pearson's chi square	*p* value
Incident location	42.642***	<.001
Initial charge	1.487	.475
Incident status	300<.001***	<.001
Evidence of drug involvement	.096a	.757
Type of drug involvement	2.284a	.516
Drugs involved	5.680	.128
Incident occur in the course of another crime	2.371a	.124
Type of crime	18.712a*	.016
Sex	.242a	.622
Age	Correlation -.032	.586c
Race	6.602a	.359
Employment status	79.769***	<.001
Marital status	12.132	.096
Alcohol intake	5.797*	.016
Drug intake	3.142	.076
Drug type	14.814	.063
Criminal history	.405	.524
Criminal history type	4.488	.611
Employ violence	295<.001***	<.001
Cause of death	13.690	.134
Weapon used in incident	<.001	.984
Weapon type	89.113***	<.001
Incident involve a firearm	.351	.839
Firearm make	8.311	.404
Firearm model	16.083	.518
Firearm calibre	14.541	.337
Type of firearm	6.520	.259
Firearm CLEBC classification	6.301	.278
Registered to own firearm used in incident	2.338	.126
Licensed to own firearm used in incident	2.338	.126
Motive	96.419***	<.001
Type of domestic argument	18.799*	.009
Offenders mental condition	292<.001***	<.001

Note. # Continuity correction for 2 x 2 table used; * Significant at α< .01; ** Significant at α< .001.

Categorical regression analysis was undertaken to evaluate the ability of these identified variables to predict single-victim homicide solvability. The categorical regression model was statistically significant, $\chi^2(4) = 27.402$, $p < .0015$. The model explained 96.8% (Nagelkerke R^2) of the variance in solved homicides and correctly classified 71.0% of cases. Nagelkerke's R2 indicated a very strong relationship between prediction and grouping. Prediction success overall was 78% (-2 Log Likelihood=77.601a). A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between solved and unsolved cases (See Table 4 for chi square, $p < .001$ with $df = 2$). Cox and Snell's *R*-Square indicates that 72.5% of the variation in the dependent variable (solved) is explained by the logistic model.

The Wald criterion demonstrated that Incident Location; Type of Crime that occurred; Victim's marital and employment status, the type of drug affecting the victim at the time of the homicide event, the weapon type used to fatally injure the victim, the motive and type of domestic argument all made a significant contribution to prediction (p = <.001). The variables: year of event (analysed as change in homicide incidents over time), victim's intake of alcohol and drug use demonstrated a significance level above .05 which identified the researcher's model with the predictors was significantly different from the one with the constant only. Initially, the Chi square was used to assess significance of these ratios. The probability failed to reach the 5% significance level, therefore supporting the null hypothesis that

knowing the independent variables cannot help in predicting the dependent variable.

Table 5
Model Summary

Multiple R	R square	Adjusted R square	Apparent prediction error
.831	.691	.593	.309

Note. Dependent variable = solved. Predictors = inci loc type of crime, victim 1 marital status, victim 1 drug type, victim 1 employment status, victim 1 weapon type, victim 1 motive, and victim 1 type of domestic argument.

There was a statistically significant difference between groups as determined by one-way ANOVA ($F(72,227) = 7.039$, $p = <.001$) (Table 6).

Table 6
ANOVA

	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	207.193	72	2.878	7.039	<.001
Residual	92.807	227	.409		
Total	300<.001	299			

Note. Dependent variable = solved. Predictors = inci loc type of crime, victim 1 marital status, victim 1 drug type, victim 1 employment status, victim 1 weapon type, victim 1 motive, and victim 1 type of domestic argument.

Table 7
Correlations and Tolerance

Variable	Correlations			Importance	Tolerance	
	Zero-order	Partial	Part		After trans.	Before trans.
Inci loc	.245	.399	.242	.086	.986	.957
Type of crime	.085	.228	.130	.017	.945	.982
marital status	.142	.402	.244	.055	.838	.962
drug type	.182	.197	.112	.030	.976	.977
employment status	.433	.475	.300	.211	.796	.974
weapon type	.509	.500	.321	.250	.898	.907
motive	.556	.597	.413	.354	.882	.932
type of domestic argument	-.018	.208	.118	-.003	.957	.958

Note. Dependent variable = solved. Trans = transformation.

Change in Homicide Clearance Rates Over Time

The categorical analysis showed that there does not appear to be a time trend in the solvability of murders occurring in NSW, meaning that there has been no significant change in solvability from 1996 till 2006 (Table 8). This finding was not anticipated as

increasing technologies and advances in the field of forensic science (Weedn & Hicks, 1998), education and training for law enforcement, and advances in law enforcement units, such as Unsolved Homicide Squads (Poole & Jurovics, 1993; Regini, 1997; Walton, 2006) would be expected to increase the capabilities of police to solve homicides. Conversely, it is possible that a change in homicide typologies (less domestic and more acquaintance/stranger homicides occurring in 2006, than previously) have altered the level of clearance, but further research is required.

Table 8:

Solved Year Cross Tabulation - Change in Homicide Clearance Rates Over Time

		Year											
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Unsolved	Count	8	9	14	21	20	12	22	13	10	10	11	150
	% within Solved	5.3%	6.0%	9.3%	14.0%	13.3%	8.0%	14.7%	8.7%	6.7%	6.7%	7.3%	100.0%
	% within year	34.8%	34.6%	53.8%	65.6%	58.8%	50.0%	53.7%	46.4%	38.5%	52.6%	55.0%	50.0%
	% of Total	2.7%	3.0%	4.7%	7.0%	6.7%	4.0%	7.3%	4.3%	3.3%	3.3%	3.7%	50.0%
Solved	Count	15	17	12	11	14	12	19	15	16	9	9	150
	% within Solved	10.0%	11.3%	8.0%	7.3%	9.3%	8.0%	12.7%	10.0%	10.7%	6.0%	6.0%	100.0%
	% within year	65.2%	65.4%	46.2%	34.4%	41.2%	50.0%	46.3%	53.6%	61.5%	47.4%	45.0%	50.0%
	% of Total	5.0%	5.7%	4.0%	3.7%	4.7%	4.0%	6.3%	5.0%	5.3%	3.0%	3.0%	50.0%
Total	Count	23	26	26	32	34	24	41	28	26	19	20	300
	% within Solved	7.7%	8.7%	8.7%	10.7%	11.3%	8.0%	13.7%	9.3%	8.7%	6.3%	6.7%	100.0%
	% within year	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	7.7%	8.7%	8.7%	10.7%	11.3%	8.0%	13.7%	9.3%	8.7%	6.3%	6.7%	100.0%

Explanatory variables were chosen on the basis of the results in Table 4 with the final model, whose estimated regression coefficients are shown in Table 5, resulted from a process of variable selection that began with age, gender, racial appearance and employment status of victims as the first block of regressors. According to Messner and Tardiff's (1985) approach, these variables measured socioeconomic characteristics associated with the routine activities of victims and offenders.

Table 9
Coefficients

Variable	Standardised coefficients		*df*	*F*	Sig.
	Beta	Bootstrap (1000) estimate of std. error			
Incident location	.244	.044	16	30.395	<.001
Type of crime	.134	.045	5	8.809	<.001
Marital status	.267	.082	7	10.575	<.001
Drug type	.113	.041	8	7.722	<.001
Employment status	.336	.063	8	28.392	<.001
Weapon type	.339	.048	10	49.896	<.001
Motive	.440	.053	11	67.775	<.001
Type of domestic argument	.121	.050	7	5.874	<.001

Note. Dependent variable = solved.

Discussion

Incident Location

Crime scene location, an evidentiary factor, is one of the six significant variables discovered in the results. As far as the location of the crime is concerned, the only significant predictor is *private home*. Thus, if a homicide has occurred in a private residence, its solvability is significantly higher than if it had occurred in a

public place. Given the intimate nature of a private location[28] (i.e., residence), where individuals known to each other consistently interact, it is a logical conclusion and the results support existing literature (Keppel & Weiss, 1992; Wellford & Cronin, 1999). Results demonstrate that of the 150 solved homicides, 94 (63%) occurred within the victim's or the offender's place of residence, whereas within the unsolved cohort, only 58 (38%) occurred within a private residence.

Crime Type – Homicide in the course of another Crime

One of the most significant factors found to differentiate solved and unsolved homicides was whether the incident occurred during the commission of another offence. The comparative analysis indicates that unsolved homicides were significantly more likely than solved homicides to occur during the course of another crime (22.6% and 11.9% respectively).

Results in this study support previous international research, in that this study found that homicides committed during the commission of other crimes were more difficult to solve. Homicide crime scene research shows that two concomitant types of crime can be identified through the analysis of POI behaviours during the commission of another crime. These being:

- Sexual offences
- Kidnapping/abduction
- Robbery – Definition: Seizing property by means of force or fear

[28] For the purposes of this research, a private location is considered a dwelling, whether it is a house or apartment, where a person has established a residence regardless of the amount of time they have lived there. A public location is defined as a public space accessible to anybody, such as a street, parkland or public house.

- Other violent crime – Separate from homicide incident (Torture)
- Arson – Homicide as a result of arson (not vice versa)
- Break & enter – Trespass: usually combined with theft or robbery
- Theft – Definition: Seizing property by means of dishonesty or deception
- Other property – Fraud; et cetera
- Prostitution
- Drug offences – Administrate drug; et cetera

These actions are associated with more organised offenders who are cognisant of forensic techniques and demonstrate that homicides that involve the commission of property and/or sexual crimes are less likely to be solved. The results from this research also support previous Australia research by Mouzos and Muller (2001).

Employment

Results indicate that when the victim was employed, the homicide appeared to be *harder* to solve than if the victim were unemployed. This result was unexpected so there was further discussion with investigators in an attempt to understand this finding that unfortunately did not produce any further specific explanation. However, their general opinion seemed to be that police did not routinely record employment status for victims where clear leads in the investigation were initially available. The opinion was that it probably related to an issue of the availability of many other pieces of pertinent information in relation to the case(s), and nothing to do with employment status.

In relation to the POI, 2 (1.3%) were recorded as aged pensioners (retired), 5 (3.3%) were *employed* completing domestic duties, 3 (2%) were full-time students, 3 (2%) were receiving a disability pension, and 1 (0.6%) a sole parent pension. Almost half – 74 (49%) – of all known offenders were unemployed, with nearly a third – 46 (30%) – of the total being gainfully employed at the time of the homicide event. In addition, 15 (10%) were classified as unknown, and 1 (0.6%) was listed as not applicable.

The findings in this study suggested that employment status was statistically significant; however, the literature and discussions with investigators suggest that this was an anomaly. Student status did not appear to make any difference. The findings for this section supported the study in 2001 by Mouzos and Muller that demonstrated that a victim being employed at the time of their death did not contribute to the solving of the case. This finding goes against expectation as an employed person's established pattern of behaviour would suggest that the case would be easier to solve, for example, investigators could follow the pattern of behaviour and more readily locate witnesses, since an employed person is generally expected to attend their place of employment between set hours, on specific days and at a specific location. This finding may also be explained as a result of the researcher utilizing a micro, rather than macro methodology. In that, an employed person widens the net of their contacts, deliberate and incidental, and locational span of

activities, compared to an unemployed person with probably a more limited circle even with their greater freedom of time and association.

Weapon - Victim Cause of Death

An offender's choice of weaponry may be a function of rational calculation or simple opportunity. Offenders in instrumental homicides, those events that involve careful planning, bring the murder weapon, anticipating violent confrontations with their victims based on their past interactions (Salfati, 2000; Salfati & Haratsis, 2001), whereas, offenders in expressive homicide, those that tend to begin as an argument or fight, often use weapons found at the scene to kill their victims in an impulsive act during the commission of other crimes (Santtila, Canter, Elfgren, & Häkkänen 2001).

The results indicate that homicides where the victim was killed by drugs, a firearm or sharp instruments were more likely to be solved; the rationale being that homicides committed with contact weapons are more likely to bring the POI and victim into close proximity, therefore increasing the transfer of physical evidence. This result is contrary to previous studies.

Table 10
Causes of Death

Cause	Count	Percentage
Beating (blunt instrument)	41	13.6
Beating (hands or feet)	34	11.3
Beating (unknown)	1	.3
Drowning / Submersion	3	1
Drug Overdose	5	1.6
Gunshot Wound	85	28.3
Other	8	2.6
Shaking (shaken baby syndrome)	2	.6
Smoke Inhalation / Burns	5	1.6
Stab Wounds (Knife or other sharp	80	26.6

instrument)		
Strangulation / Suffocation	31	10.2
Unknown	5	1.6
Total	300	100

Informed by existing research, it was hypothesised that contact weapons (i.e., sharps, blunt objects[29], and body parts, such as hands and feet) increased the likelihood of clearance rates, whereas homicide via firearm would decrease the likelihood of solvability (Adcock, 2001).

[29] Bat or a club.

Motive

Attributing a specific motivation to a POI and the homicide event can help law enforcement solve the crime but can also assist researchers, policy makers and advocates to understanding the factors and variables that are more likely to hasten or cause the crime. In saying that, trying to allocate a single motive to a homicide incident, POI and even victim is challenging and complicated because the causes, or lack thereof, for committing a homicide will be as varied and complex as the individuals involved in the event.

No apparent motive was the most frequently recorded category in this dataset (*n* = 85, 56.6%), with finance (*n* = 16, 10.6%), arguments due to drugs (*n* = 12, 8%) and revenge (*n* = 12, 8%) following. The next most commonly recorded motive was other argument (*n* = 9, 6%). The least commonly recorded motives for a homicide in NSW between 1994-1995 and 2005-2006 were sexual (*n* = 3, 2%) and racial vilification, jealousy, desertion and alcohol – each accounting for only 1% of homicides (*n* = 1 respectively).

Distinguishing motive by the type of homicide that has occurred illustrated that nearly half of all the intimate or domestic homicides recorded (49%) were recorded as having started with an argument (undetermined), one third (33%) had no motive recorded, and 10 (5%) were motivated by a relationship ending.

The motivation of the POI will inform the level of risk they are prepared to take to commit the crime. Based upon these results, where the majority had no

apparent motive listed, there is scope for further investigation in this area. Practitioners and policy makers seek information on motive for different reasons; practitioners because prediction of violent behaviour can improve their knowledge of the risk factors for offending, often apparent in childhood and policy makers, because it is a significant instrument of prevention and deterrence and is also evidence of predictive efficacy which can be used to tailor anti-violence programs. These results were unexpected as domestic violence, alcohol and jealousy were expected to be the highest motives listed, given that intimate/domestic homicides represented the largest proportion of homicides throughout the period studied.

Victim Employs Violence

The results demonstrate that if a victim employed violence, either initiating a physical altercation or reacting to an attack with violence, then police were more likely to solve their case. Reasons for this result could be the increased likelihood of the transfer of physical evidence, such as: bodily fluids, fibres and hair between the victim and the perpetrator. A second reason might be that the altercation would raise greater witness awareness through prolonged assault, noise generated and the consistent motion of the participants in the assault. These factors would not necessarily be present in a stealth attack.

Further reasons could be found in previous research. Dearden and Payne (2009) stated that, during the period of 2000-2006, 47% (n=735) of all homicides in Australia included alcohol being used by both the victim and the offender. Graham and Homel (2008) and Dingwall (2006) found numerous reasons for how the

consumption of alcohol could impact on behaviour. Examples of this are persons affected by alcohol tended to be more impulsive, less inhibited, making it more difficult to appreciate other people's perspectives. Alcohol may also have a negative effect on problem solving and introspection creating a greater potential for violence.

Victims employing violence can also be identified in cases related to gang homicide. Homicide events where premeditated assaults occur with fatal outcomes, whether part of a righteous dispute or an initiation, are often associated with gangs – no matter how big or organised.

A person initiating a violent altercation with another that ends in their victimisation creates a lot of difficulty to determine that they are both the victim and the offender. Another example is when a victim in self-defence responds with disproportional violence and kills their attacker.

Limitations

This part of the thesis is a secondary analysis of homicide data provided by the NSW Police Force, collected and collated by the NHMP and, as such, there are a few intrinsic limitations that must be noted. The first limitation is that the data were collected by another agency, NHMP, and are therefore subject to any errors inherent in their data collection and recording procedures. Therefore, as with all secondary analysis, the internal validity of the research can be endangered because the data were previously collected by someone else for their own reasons. A second limitation is that a quantitative method is not favourable when examining the fundamental characteristics of homicide or the impediments that hamper or promote homicide investigations expected from a qualitative or mixed-method examination.

Thirdly, like other researchers (Addington, 2006; Roberts, 2007; Xu, 2008), this thesis examines solvability factors using variables, such as age, ethnicity, gender and marital status, to assess the individual factor's effect on homicide clearance rates. As a result, variables, or community-related data, are not reviewed. This research thus offers a narrow picture of specific solvability factors and whether knowledge of them could create any change in homicide clearance rates overall.

Fourthly, this study also encounters an external validity threat in that it focuses solely on one Australian state, New South Wales (NSW). As such, the generalisability of the results must be approached with some caution. NSW, however, is the most populated of all Australian States and Territories and a region that exhibits a higher homicide rate but a lower clearance rate in comparison to the rest of the nation. To the extent that clearance rates in other urban jurisdictions are similar to those of NSW, the results may be useful in other jurisdictions and police departments. Although the generalisability of the findings of this study should be approached with caution, the findings can be utilised to contribute to the general body of research on homicide clearance rates.

Conclusion

This chapter introduced the concept of solvability factors and indicated their importance in homicide investigations; it has also discussed homicide in Australia, its causes and consequences. It began with an international and national literature review detailing the aetiology of homicide and thus identified common solvability factors, being age, gender, employment, ethnicity, marital status and weapon. This is

imperative to understanding why the levels of homicide are decreasing and yet the number of cases being solved remains relatively stable. Using aggregate data sourced from the NHMP, the study used a categorical regression analysis of 300 cases (150 solved and 150 unsolved) to determine which of 28 variables provided by the NHMP were statistically predictive, and compared and contrasted the results with the current national picture. There were six predictive solvability factors identified at this stage (presented in table below). Identifying these variables assists in not only empirically proving that some factors are predictive and therefore useful to an investigator in clearing more cases, but also opens a number of other avenues for analysis and discussion with regard to police process and procedures.

Table 11
Identified Predictive Solvability Factors

Extra-Legal Factors	Evidentiary Factors
Employment status	Incident location: private residence
Motive	Victim employs violence
	Victim cause of death: weapon choice
	Homicide occurred in the course of another crime – type of crime

The new extra-legal and evidentiary factors discovered in this analysis led to new questions being queried and answered in Chapter Three: 'Police' which relate to the overall aims of this thesis. They were:

- If there are solvability factors specific to each homicide typology, then how can police exploit them to increase their current clearance rates?

- How do police perceive their ability, capacity, management and culture in relation to clearing homicides?

Chapter Three "Police and Homicide Investigations in NSW" presents three significant pieces of information. The first is the answers to the questions posed above, the second is the answers to the survey questions posed to police investigators and finally, to add to extant research the NSW police practitioner's viewpoint.

Chapter 3: Police and Homicide Investigations in NSW, Australia

> It had always been a part of his job which he found difficult, the total lack of privacy for the victim. Murder stripped away more than life itself. The body was parceled, labelled, dissected; address books, diaries, confidential letters, every part of the victim's life was sought out and scrutinized…hands moved among the clothes, picked up and examined the small possessions, recorded and labelled for public view the sad detritus of sometimes pathetic lives. (James, 2004, p. 341)

This chapter will review the work of the NSW Police State Crime Command (SCC) Homicide Squad and whether there are solvability factors, specific to each homicide typology that investigators could use and develop to increase their current clearance rates. It will also investigate how the SCC Homicide Squad observes their own ability, capacity, management and culture as individuals within a team environment in relation to clearing homicides. To achieve this, a survey was completed by the majority of the active investigative members of the squad.

In 2005, the Australian average for clearing a homicide within a month from the incident was 63.6%, yet New South Wales (NSW) was lagging at 53% (Pelly, 2005). Even though homicide clearance rates have now increased in New South Wales to 78% (NSW Police Data 2013), the percentage of homicides that remain unsolved is still problematic for a number of reasons: firstly, clearance rates are regarded as the report card for police (Turvey, 2006); secondly, unsolved cases are

regarded as a failure by police to serve and protect the community (Maguire, King, Johnson, & Katz, 2010); and thirdly, people believe that, given sufficient resources, police could solve most homicides (Reisig & Correia, 1997).

> There have also been significant changes in society, where people are more unlikely to get involved in investigations as credible witnesses. Another reason given for unsolved homicides is… it could also reflect a natural lag in solving them. Given the fact that it can take several years to solve some homicides, more recently recorded homicides will always include a higher proportion of unsolved cases than those which occurred in earlier years. (NSW Bureau of Crime Statistics and Research, 1994, p. 6)

In contrast to the televised crime drama, where homicides are solved within hours because of eyewitness assistance and *instantaneous* testing of swathes of forensic evidence, real homicide investigations and their subsequent clearance are far more difficult. In reality, there are budgetary constraints and restricted resources be they human or technological and decisions have to be made on the most effective use of limited resources. With this in mind, if predictive solvability factors[30] could be identified and utilised to effectively contribute to a homicide being solved, police resources could be managed more efficiently, thereby facilitating better management of homicide investigation and thus possibly achieving higher clearance rates. The knowledge of the predictive nature of solvability factors in hand with the style of detection and investigation should affect the level of clearance.

[30] The NHMP variables will be referred to as 'solvability factors' for the purpose of this thesis.

Wellford and Cronin (1999) reported that law enforcement agencies proportionally spent a lot of time and effort endeavouring to increase their homicide clearance rates. Researchers have also devoted considerable time, attention and rigour to better understanding homicide clearance rates, factors that influence them and variables that directly relate to them. It is this researcher's contention that these divergent approaches have led to a body of knowledge that is split by virtue of capacity, access and experience. Investigators rely on their training, experiences and 'gut instinct' to foster, change and explain their assumptions and opinions with regard to influential solvability factors which are not typically validated by research. In contrast, academic research is systematic, has rigour and validity but is generally theoretically based and not applicable or practical enough to assist police in improving homicide clearance rates.

Eliopulos (1993) and Greenwood and Petersilia (1975) found that human resources, an individual investigator's personal traits, education and training, and caseload did not significantly alter clearance rates. Furthermore, there is extant research that suggests police resources have limited impact on clearance rates and that specific case variables are more significant (Greenwood & Petersilia, 1975; Keppel & Weis, 1994; Marché, 1994; Reiss, 1971; Wellford, 1974). In fact, the amount of police resources available, such as budget and the ratio of police employees to (per head) civilian population, were shown to have no appreciable effect on clearance rates: "clearance of index crimes is largely a function of the nature of the crime (in particular, the identification of the offender by the victim or a witness)" (Wellford,

1974, as cited by Hunter, 1997, p. 31). Finally, it was Hunter's research (1997) that illustrated that the integrity of the crime scene and the preservation of forensic evidence were major factors that police could affect; however, factors such as weather, location of the crime scene (public space) or available witnesses remained outside of police control.

> "Those guys did a great job locking him up." *We can't put something in the computer and 'poof' it spits out the offender.* Willing is not just looking back on the year but also cases that detectives have solved since the inception of the squad in 1976. In the rooms that run off the hallway, there are 97 detectives who speak for the dead. "My guys are the best. They are the best. They are," he said. There are figures to back up his shameless spruiking. His detectives solve 80 per cent of cases they assume responsibility for…This year 239 cases were sent to the homicide squad, including murders, manslaughters, suspicious disappearances, complex coronial matters and critical incidents (Partridge, 2013, p. 1).

Investigators must be prepared to dedicate themselves for the length and breadth of the investigation, no matter how complex it is; otherwise, the chances of the homicide being solved diminish. If the investigation lacks quality at the beginning, then later and further efforts by detectives are not likely to solve the case (ICMA, 1991, as cited in Hunter, 1997, p. 35). It is imperative that detectives and investigators keep an open mind and see the evidence for what it is; moreover, the style of detection is of primary importance due to cognitive bias and heuristic 'leaps', which

will be discussed further, after a short discussion on the two types of investigative reasoning – inductive and deductive.

Logic and Reasoning

Inductive reasoning is the process of reasoning in which the premise of an argument is believed to support the conclusion based upon probabilities, but does not ensure it (Monckton-Smith, Hart, Adams, & Webb, 2013). This approach is based on logic and experience. It is used to ascribe properties on one or a small number of observations, or to formulate rules based on limited observations of recurring phenomenal patterns. Induction is employed in using specific propositions such as:

- This ice is cold

to infer general propositions such as:

- All ice is cold

Whereas, deductive reasoning is the process of reasoning from a general premise to reach a specific conclusion. For example, if all premises are true and the rules of deductive logic are followed, then the conclusion reached has to be true (Monckton-Smith et al., 2013). As an example, Isaac Newton *induced* his theory of gravity by watching, monitoring and considering how apples fell. Once he induced the principle, he applied it *deductively* to conclude other predictions. So deductive reasoning says:

- All apples are fruit
- Some apples are red
- Therefore some fruit is red.

In most cases, the process of inductive and deductive reasoning is a subconscious process, one that everyone engages in when processing complex information through heuristic techniques. Heuristics are *experience-based* techniques for problem solving, learning, and discovery (Barrett, 2009; Fahsing, Glomseth, & Gottschalk, 2008). When the brain is faced with large amounts of simultaneous information, it automatically makes a heuristic leap, therefore excluding information that it considers incorrect, un-useful, or importantly, contrary to a preconceived notion of what it expects to find. As noted above, such heuristic techniques are based on the individual's experience. For example: *a young child has been murdered at home; my mother was a loving nurturing soul, therefore all mothers are like my mother; therefore this mother could not have killed her child.*

Based on how some detectives perceive the Australian society - such understandings are made up of experience and stereotypes - the automatic and subconscious presumption is that a parent could not kill their own child due to the fact that the detective's parents were supportive, nurturing and loving. However, if suspicion does fall upon the parents, the father is the more likely POI as the statistical average is that more males kill than females. Data do indeed support such a presumption; however, this leads to a narrowing of the investigative focus onto the father, excluding the mother as a possible POI. Hence, an over-reliance on the *intimate* and *stranger* typologies arguably constitutes a weakness in current police investigation practices. Therefore, this thesis focused particular attention on exploring existing homicide cases that contained characteristics that do not neatly fall into this well-established duality. The purpose of this approach was to identify the

range of probable solvability factors that will assist police in increasing their clearance rates.

Some of the more recent behavioural science literature is potentially instructive in improving conceptions of the *decision frames* that are applied to police in the Criminal Justice System (CJS; Turvey, 2010). This emergent literature shows that when under stress, human decision making tends to be influenced by a range of biases, heuristics and "decision rules" (Shen, Keppens, Aitken, Schafer, & Lee, 2006). Given the epidemiology of premeditated fatal violence, most homicide investigations are fairly automated undertakings, driven by set standard operating procedures.

Relying on *gut feelings* about POIs rather than performing a complete victimology risks a cognitive distortion called *focalism*, or getting attached to specific information and adjusting all data toward it. This leaves the investigation vulnerable to items that *feel right* over objective evaluation (Ask & Granhag, 2005). Focalism raises the significance of certain items to fit a predetermined context. Best practices offer a structure for avoiding this approach as 'probability trumps possibility' (Stelfox & Pease, 2005, p:21).

When investigations are more protracted or more difficult than the "average" domestic homicide, greater reliance is placed on scientific evidence rather than admissions (Faigman, Saks, Sanders, & Cheng, 2008). It is essential that the public gain confidence and have trust in the police if police are to properly respond to the changing face of homicide. Detective Sergeant Venditto (2005) stated that an investigation traditionally was seen as a process of building a case, not solving one.

However, like many other people in this field, he agrees that it is often *good old-fashioned* policing that solves homicides. An example of this is that in earlier times, police developed and relied on human intelligence sources by recruiting and managing them as the *eyes and ears* of the detective in the community. Known as a *source, gig* or *informant*, they could provide extensive information relevant to police investigations, such as knowledge of local POIs, networks, their modus operandi and if one were identified, an intimate knowledge of the POI. Currently, although informants still exist:

> … investigators are faced with the barriers of an easily mobile public and a less than cooperative society in general. As such, with the changes and advances made in today's technological society, homicide investigations now rely heavily on scientific examination as well as standard investigative techniques. (Williams, 1997, p. 16)

The realities of open homicide investigations, such as Taskforce Air, better known as the "Backpacker Murders" demonstrate that police have to organise, store and recall at a moment's notice a wealth of information. An example that illustrates this is that during the Taskforce Air investigation, detectives estimated that there was around 1.5 million individual pieces of information just 12 weeks after the discovery of the first victims (personal communication, DI Andrew Waterman, 14 November 2007). Given the complexities within major homicide investigations, information management is a significant and major challenge. Taskforce Air identified difficulties such as when investigators tried to remain abreast of new information whilst

working across different Local Area Commands (LAC) and incompatible databases. Increasingly critical to the detection and apprehension of suspects is the *real time* availability of intelligence.

Linnell (2000) states:

> The technology promises an end to those old days when simple human error, one glitch in a long series of events, could lead to a humiliating moment in court when it was revealed that something important had been lost (p. 46).

In answer to situations like this, the Australian Bureau of Criminal Intelligence (ABCI) was created, to answer the issue of disparate criminal data sets, in that it has complemented its "databases by developing the Australian Law Enforcement Intelligence Net (ALEIN) to provide a highly protected communications network for rapid and secure transfer of information between state police networks throughout Australia" (Mouzos, 2001, p. 6).

The result is that detectives are guided by, and in many ways beholden to, a complex array of formal and informal policies, systems, guidelines, procedures and conventions (Innes, 2003). The extent to which investigations are regarded as successful depends largely on how well officers navigate their way through this field. Moreover, it is now increasingly a highly technical field with significant advances in forensic science and reliance upon DNA evidence (Williams & Johnson, 2008).

The more important aspect is to attend carefully to the subtleties and nuances of how detectives engage in their work of investigating homicides. There is a complex interplay of decisions, organisational structures and uncertain knowledge that defines the contemporary homicide investigation and which requires deconstructing. Homicide investigations are, as Richard Sennett has recently described in his study of collaborative interaction in complex social systems, replete

with "little dramas of assertion and deference" (Sennett, 2012, p. 17). They are complex social systems, comprising distinctive components that are functionally interconnected and inter-dependent, and that work together to accomplish a larger task.

Why Fewer Homicide Cases Get Solved Today

As previously discussed, internationally, it is a widely accepted standard to divide events into the three overarching typologies of *intimate*, *acquaintance* and *stranger* homicide; the former where police can identify an intimate or domestic relationship between the victim and the Person of Interest (POI) and the latter where no obvious relationship can be established. One hypothesis considered within this thesis is that there has been an increase in the incidence of acquaintance and stranger homicides in New South Wales (NSW) over the past 30 years that has directly contributed to the decrease in clearance rates. This is an area of specificity that needs to be researched in depth in the future. An expanding body of literature suggests that homicide trends are changing and increasing the complexity of investigation, while homicide events and clearance rates are declining (Geberth, 1996; Mouzos & Muller, 2001; Riedel & Jarvis, 1999; Rojek, 1996; Sidrow, 1999).

The three types of homicide that appear to be the most difficult to solve are stranger homicides, gang/organised crime related, and drug related (Finn & Healey, 1996; Koedam, 1993). Mouzos and Muller (2001) also argue that homicides that occur during the commission of another crime are less likely to be solved. There are reasons for this: firstly, offenders can employ tactics such as witness intimidation and obstruction which impede police investigations (Litwin, 2004; Puckett & Lundman,

2003; Regoeczi et al., 2000; Wellford & Cronin, 1999, 2000); and secondly, issues can arise over jurisdiction of the crime scene and incident management. In a case of robbery/homicide, several squads will be involved with different priorities for resources in investigation, adding to the complexity of collecting evidence and successfully clearing the case (Drake, 2003).

Two types of homicides that increase the difficulties of clearing the event are co-committed crimes and serial homicide events. In the early 1980s, Gilbert's study reported that the rate of felony homicides, the unlawful killing of another during the commission of another serious crime such as arson, had increased. Gilbert (1983) concluded that it was the increase in stranger homicides that occurred during the commission of another crime that led to the decline of homicide clearance rates. He reported that in the United States, law enforcement believed that the decrease in clearance rates was directly correlated to the increase in stranger homicides. None of this literature dealt with policing issues or the practices of investigation. The presence of co-committed crimes, particularly property and sexual offences, has been shown to decrease the likelihood of solving a homicide case (Mouzos & Muller, 2001; Riedel & Rinehart, 1996; Salfati, 2000; Salfati & Haratsis, 2001; Santtila, Häkkänen, Canter, & Elfgren, 2003). Several criminologists have suggested that the concomitancy of robbery with Gay, Lesbian, Bisexual and Transgendered (GLBT) homicides decreases the likelihood of the crime being solved, because it increases the complexity of the investigation (Drake, 2003; Geberth, 1996; Karmen, 1996; Swigert, Farrell, & Yoels, 1976; Tomsen & Donaldson, 2003; Van Gemert, 1994).

In the past decade in NSW, the number of homicides officially recorded as *solved* by the police has decreased, but so have the overall national clearance rates for homicides (Dearden & Jones, 2008). Keel, Jarvis, and Muirhead (2008) posited that the upper echelons of police management were increasingly concerned about the rising numbers of unsolved homicides and the reasons for these changes to their statistics, and what managers could do to assist and support their investigators to increase the number of solved homicides.

Not solving these cases also affects the morale and effectiveness of police officers as a whole, and is of particular concern for those employed in departments where fewer homicides are solved (Adcock, 2001). The issue of unsolved homicide cases tends to highlight vulnerabilities in the entire criminal justice system, and greatly affects not only the public concerns for safety, but the public's faith in the system. Specifically, it rivets the attention of surviving family members on what they may perceive as a lack of an adequate response on the part of justice officials. A final consideration is that changes in technology have facilitated globalisation of crime and thus affect its solvability. For example, crime groups that originally had a specific ethnic origin and sphere of influence, such as the Mafia (Paoli, 2003), Triads (Comber, 2009) and Yakusa (Kaplan & Dubro, 2012), now function globally.

Homicide Clearance Rates

Victim characteristics. Victim characteristics that have been examined in the literature include victim age, gender, race, prior criminal record, employment status, marital status, alcohol/drug status, and relationship with offender. Overseas research has generally found that homicides involving younger victims are

significantly more likely to be cleared than homicides involving older victims (Addington, 2006; Alderden & Lavery, 2007; Jiao, 2007; Lee, 2005; Litwin, 2004; Litwin & Xu, 2007; Puckett & Lundman, 2003; Regoeczi, Jarvis, & Riedel, 2008; Trussler, 2010). It has also generally found that homicides involving victims known to the offender are significantly more likely to be solved (Jiao, 2007; Lee, 2005). Mixed results have been found for victim gender, with some studies finding that homicides involving female victims are significantly more likely to be cleared than homicides involving male victims (Alderden & Lavery, 2007; Lee, 2005; Regoeczi et al., 2008; Trussler, 2010); others finding the opposite (Jiao, 2007; Litwin & Xu, 2007); and others still finding that gender does not significantly predict homicide clearance (Litwin, 2004; Puckett & Lundman, 2003). Similarly mixed results have been found for victim ethnicity/race. Several studies have found that homicides involving Caucasian victims are more likely to be cleared than cases involving African-American and/or Latino victims (Addington, 2006; Alderden & Levery, 2007; Lee, 2005; Litwin, 2004; Litwin & Xu, 2007; Xu, 2008); however, others have found that race has no impact on homicide clearance (Jiao, 2007; Puckett & Lundman, 2003) or that homicides involving non-White victims are more likely to be solved (Regoeczi, Kennedy, & Silverman, 2000). Another factor that has been inconsistently linked to homicide clearance is victim prior criminal record (see Alderden & Lavery, 2007; Jiao, 2007; Litwin, 2004; Litwin & Xu, 2007; Xu, 2008).

In Australia, Mouzos and Muller (2001) found that solved homicides were significantly more likely than unsolved homicides to involve a victim under the age

of 30 years (42.13% vs. 33.72%), a victim not in the labour force (74.18% vs. 63.95%), an Indigenous victim (13.64% vs. 3.49%), and a victim under the influence of drugs or alcohol (33.17% vs. 14.42%). The gender and marital status of the victim was not found to significantly differentiate solved and unsolved homicides. They also found that solved homicides were significantly more likely to involve victims known to the offender. However, the authors did not examine victim prior criminal record, so it is unclear if this has a relationship with homicide clearance in Australia.

Offender characteristics. Only two studies known to the author have examined the impact of offender characteristics on homicide clearance. An overseas study by Wellford and Cronin (2000) found that cases involving African American offenders (90%) were significantly more likely to be cleared than cases involving White offenders (78%) and Hispanic offenders (63%). They also found that the sex of the offender did not significantly affect homicide clearance. These findings differ from the Australian study, which found that the offenders in solved homicides were significantly more likely than the offenders in unsolved homicides to be female and Indigenous. They also found that the offenders of solved homicides were significantly more likely than the offenders of unsolved homicides to be married (or previously married), to be employed, to not be aged between 18 and 34 years, to not have a previous criminal history, and to have committed the offence alone (Mouzos & Muller, 2001).

Incident characteristics. Incident characteristics that have been examined in the literature include weapon used, homicide/body location, and homicide

circumstance, number of victims, time and day of incident and whether it occurred during the course of another crime. With regard to weapon type, overseas research has consistently found that homicides involving firearms are less likely to be solved than those involving other weapons (e.g., knife, hands and feet; Addington, 2006; Alderden & Lavery, 2007; Puckett & Lundman, 2003; Trussler, 2010; Wellford & Cronin, 1999). It has been suggested that this is because weapons that bring victims and offenders in close proximity produce more physical evidence (Alderton & Lavery, 2007). The location of the homicide/body is another characteristic that has been found to be important in homicide clearance. Several studies have found that homicides occurring in residential locations are significantly more likely to be solved than those occurring in secluded areas (e.g., alleys; Litwin & Xu, 2007), in general public (Litwin, 2004), or in all other locations (Addington, 2006; Regoeczi et al., 2008). According to Litwin (2004), this could be because homicides occurring in the home are more likely to be committed by someone known to the victim, and these types of homicides are inherently easier to solve. These studies have also found that homicides occurring in public areas are more likely to be solved than those occurring in secluded areas (Litwin & Xu, 2007). This may be because they are more likely to have witnesses (Litwin & Xu, 2007).

Another incident-related characteristic consistently found to predict homicide clearance overseas is homicide circumstance. A study by Litwin (2004) found that homicides involving general altercations were significantly more likely to be cleared than homicides with unknown circumstances, concomitant felonies, and drug or

gang-related homicides. Additionally, Litwin and Xu (2007) found that drug or gang-related homicides, money related homicides, and domestic violence homicides were significantly more likely to be cleared than other/unknown homicides. This latter finding is supported by Jiao (2007), who found that domestic violence homicides were significantly more likely to be solved than instrumental/expressive homicides and other/unknown homicides. The number of homicide victims is another factor that has been consistently found to predict homicide clearance. Numerous studies have found that cases involving multiple victims are significantly more likely to be cleared than cases involving single victims (see, for example, Addington, 2006; Lee, 2005). According to Lee (2005), this may be because these cases are considered more heinous by the police so they direct more effort towards solving them. Two less frequently examined factors are the time and day of the incident. Both have generally been found to be unrelated to case clearance (see, for example, Regoeczi et al., 2008; Wellford & Cronin, 2000).

The above findings partially support Australian findings. Mouzos and Muller (2001) found that solved homicides were significantly more likely than unsolved homicides to occur between 6pm and 6am (62.79% vs. 54.65%), involve multiple victims (12.52% vs. 6.74%), occur in a residential location (61.91% vs. 43.02%), not occur during the course of another crime (88.09% vs. 77.44%), and not involve the use of a firearm (80.23% vs. 74.65%). The day of the week (weekday or weekend) was not found to significantly differentiate the two homicide types.

Police investigative practices and external characteristics. Police investigative and external characteristics that have been examined or identified in the literature include technology use, detective training, detective experience, detective workload, number of detectives assigned to case, speed of arrival at scene, media coverage, presence of witnesses, witness helpfulness, legal requirements, organisational structure, time take for forensic exams and information flow. An overseas study by Keel, Jarvis, and Muirhead (2009) found that the formal training of detectives and use of 'sophisticated analytical devices' (e.g., blood splatter analysis, voice stress analysis) had a significant positive effect on homicide clearance rates; whilst, a study by Puckett and Lundman (2003) found that detective experience and workload had no discernable effect on homicide clearance. An earlier study by Wellford and Cronin (2000) found that when three or four detectives are assigned to the case, a detective arrives at the scene within 30 minutes and a computer check is conducted on the suspect and firearm, homicide cases are significantly more likely to be solved. With regard to external characteristics, a study by Lee (2005) found that in Los Angeles, cases that were covered by the *Los Angeles Times* were significantly more likely to be cleared (10% increase).

In Australia, Mouzos and Muller (2001) found that participants felt that the availability of sufficient time and resources (e.g., enough support staff and analysts), being able to allocate an experienced detective to a case as early as possible, being able to promptly attend the scene, getting an experienced detective to quickly secure the crime scene or scenes, the presence of witnesses, and the use of technology (e.g.,

listening devices and telephone intercepts) were important factors that aid homicide solvability. Conversely, witness reluctance (particularly in immigrant communities), the organisational structure, legal requirements, the time taken for forensic examinations, and poor information flow were identified by participants as factors that hinder homicide solvability.

NSW Police State Crime Command, Homicide Squad endeavour to clear all homicides reported to them, as do all other law enforcement agencies tested within extant research. Researchers have devoted decades of attention to appreciating and comprehending the factors that affect homicide clearance rates in a search to better understand and improve the likelihood that a homicide would be solved and closed. These two separate groups trying to comprehend the same functions, from different aspects, have created a bifurcated group of knowledge, information and facts. Historically, police have drawn upon their education, training and experience whilst developing their own conclusions about what factors affect clearance rates.

In contrast, academic research has been more methodical and purpose designed, however investigators have found it difficult to apply the more theoretical outcomes to improve their homicide clearance rates. This is particularly problematic, considering that homicide clearance rates are frequently utilised as a 'yardstick' for measuring the squad's performance. This is challenging as investigations are only a portion of what the investigators undertake in any working week. To some extent it can be argued that homicide is the most serious crime type and therefore the role of

solving cases such as these are amongst the most important functions for the detectives. Moreover, homicides are one of the most consistently reported crimes.

Homicide is considered to be one of the most significant crimes in society, for which the media, the general public and politicians hold the police accountable to solve, and watch with diligence the level of clearance rates (Blau, 1994; Drake, 2003; Myers, 2012; Puckett & Lundman, 2003; Turvey, 2006). It remains one of the key paradoxes of policing studies that homicide investigation is one of the most publicly visible and yet the least understood aspects of the police function. When media discuss policing, it routinely occurs in relation to a story pivoting around an unexplained violent homicide. And yet, this level of popular attention serves to obscure overall understandings of how police respond to a sudden death, a point made by Brodeur (2010) arguing that empirical research on policing has tended to be dominated by studies of uniformed officers and the patrol function.

Even though homicides are still a relatively rare statistical event in Australia, the impact they have is so significant that this type of crime almost always gains the public's attention. Homicide clearance research is limited to information obtained from law enforcement, medico-legal specialists and prosecutors linked directly to the incident. Rather than objective direct observations, data available from examining homicide investigations are most often a reflection of a responders' subjective opinion and assessment because in the past very few "outsiders" have been allowed into the Squad's investigations. Furthermore, most researchers must rely on limits within the data set by others, in relation to what variables they collect or update. As

an example, static features generated from Computer Operated Policing System (COPS) in relation to whether a homicide is cleared or not, were frequently found to be incorrect due to the fact that the investigator did not update the record after the status changed (either way); also significant was that information such as the time taken to clear each homicide was missing. There are many factors that affect the time it takes to clear a homicide'. Some of these are directly related to how the police act, others are completely out of police control.

Riedel and Jarvis (1999) summarised the homicide clearance rates situation by stating that as the more common and easier to solve types such as domestic homicide decrease, a greater proportion of cases that are more difficult to clear such as stranger homicides remain. Put very succinctly by Xu (2008):

> A common argument is that the decline in clearance rates may simply reflect the fact that the proportion of homicides that are inherently easier to clear could be declining, whereas cases that are more difficult to clear may be increasing. (p. 456)

There appears to be little consensus on the subject. Fox (2000) stated: "There is no prospect of seeing the homicide clearance rate return to the good old days when it was in the 90% range" (p. 1a) in contrast to Wellford and Cronin (1999), who posited that "there are few homicide cases that given the right initial response, the right timing, and the right dedication of resources cannot be solved" (p. 7).

Many academics argue that witness collaboration with detectives and responding patrol officers is crucial to clearing homicide cases (Greenwood, Chaiken,

& Petersilia, 1977; Reiss, 1971; Riedel & Rinehart, 1996). Mouzos and Muller (2001, p. 5) found that law enforcement professionals involved in homicide investigation share a similar opinion, as they believe that "the absence of a witness severely impedes the investigation". Wellford and Cronin (1999, 2000) determined that cases that involved an eyewitness or a witness who provides information about the circumstances, motivation, or identity of the offender or his or her whereabouts are more likely to be solved.

In the US, according to Wellford and Cronin (1999) and the Uniform Crime Reports, there has been a gradual decline in clearance rates for homicide and non-negligent manslaughter over the past 30 years. The rate of decline is from 93% in 1961 to 65% in 1993 (U.S. Department of Justice, 2010; Wellford & Cronin, 1999). During the 1960s, domestic or *intimate* homicides were the most common type of homicide, in which the investigators could establish a relationship between the victim and the offender. Whilst the general numbers regarding intimate homicides have been in decline for the past 30 years (Fox & Zawitz, 2004; Riedel & Smith, 2004), there has been a slight increase in stranger-related homicide (Fox & Zawitz, 2011; McClellan, 2007; Regoeczi & Miethe, 2003; Wellford & Cronin, 2000). Sociological research explains this via the increase of gang warfare, weapons trafficking, drugs and the breakdown of social networks and communities. Homicide solvability when it comes to stranger homicides is very low (Richardson, 2001).

Detectives have little to no control over the number of cases requiring input that are allocated to them, and there are times in which detectives may have such

large caseloads that sufficient time to investigate every conceivable avenue of enquiry is unavailable, given other job requirements, such as giving evidence in court, attending education and training programs and weekly squad briefings, plus new cases that need attention. Moreover, there is obvious pressure placed on detectives to make arrests, whether internally by higher management or externally from politicians, media and the general public.

A change of policing policy occurred in 2009 in NSW, granting full ownership for every homicide in NSW to SCC Homicide Squad for the first 72 hours, with the intent of increasing case clearance rates. Within this period, the SCC Homicide Squad could determine the complexity of the crime, and whether extensive investigation was required, and if not, the case could be transferred to the Local Area Command (LAC) detectives. The impact of this change of policy on clearance rates has not yet been explored in the literature, and is the topic planned for future research.

Cassell and Fowles (1998) assessed the impact of the Miranda v. Arizona Supreme Court judgment (1966) on clearance rates by analysing the data before and after the decision, which ruled on appropriate police procedure at the time of arrest. However, owing to limitations in reliable data collection, their study was not able to identify longitudinal relationships between homicide clearance and its predictors. Another study by Roberts (2007) analysed the National Incident Based Reporting System (NIBRS) data over a twelve-month period, measuring the length of time to clearances using event history analysis. This study could not consider independent time variables because of the constraints imposed by the dataset.

The decline in clearance rates has become a topic of research for criminal justice scholars to identify the causes and possible correlates (Wellford & Cronin, 1999). Clearance rates are directly related to deterrence theory, thus low clearance rates seriously undermine any deterrent value that charges, arrest, convictions, and eventual gaol time bring (Riedel & Jarvis, 1999; Wellford & Cronin, 1999). Furthermore, this decline can influence the general public's sense of justice and of their personal safety, and also deepen or exaggerate their fear of becoming a victim of a violent death. Homicide clearance rates have been the subject of several studies and they have illustrated that most consider the act of homicide as the *yardstick* by which other types of violent crime are measured (Mouzos, 2000).

Research suggests that homicides, both nationally and internationally, remain unsolved due to a lack of evidence, witnesses and community involvement, as well as issues associated with poor police resources and excessive workload (Mouzos & Muller, 2001; Wellford & Cronin, 1999). Homicides involving strangers, the more difficult cases to solve, often occur between people previously unknown to each other, in secret with no witnesses, thus impacting the investigator's ability to collect information and evidence on the POI (Gilbert, 1983; Lattimore, Trudeau, Riley, Leiter, & Edwards, 1997; Riedel & Jarvis, 1999). The investigator in a stranger homicide typically has no evidence of motive, little crime scene evidence, and few or no witnesses associated with the event with which to build a case (personal communication, Oxford, August 11, 2008). The type of homicide committed directly impacts and relates to clearance rates because the type will uncover critical

information in relation to the POI and their relationship with the victim, which in turn will increase the probability of police identifying a motive, forensic evidence, or potential third party eyewitnesses (Donohue, 1998; Geberth, 1996).

There are a number of ways that a third party can be involved in a homicide event such as:

- a potential witness for police
- a Human Intelligence Source or informant
- an aggressor, such as a group of young males or as a significant other present at the time of the event (Riedel, 1995)
- a family member or friend that intervenes in a personal dispute that then leads to a homicide.

Research suggested there was a much greater chance that witnesses and third parties related in some way to the victim would cooperate with police in a homicide investigation because of their vested interest in the outcome. Research by Greenwood, Chaiken, and Petersilia (1977) examined police departments in six major US cities and discovered that just over half of all recorded cases were solved when the identity of the POI(s) was known at the time the incident was reported to police. That research proposed that witness identification of a POI was the most significant factor affecting clearance rates (Greenwood et al., 1977), because the information assisted police in reducing the potential number of POIs initially (Skogan & Atunes, 1979, as cited by Hunter, 1997, p. 30). Many other researchers support these findings

of Greenwood and colleagues (Bloch & Bell, 1976; Bottomley & Pease, 1986; Greenwood et al., 1977; Keppel & Weis, 1994; Reiss, 1971; Riedel, 1995).

Extant research has previously identified specific characteristics of homicide being significantly connected to clearance rates, which are: age of victim, residence, body location, concomitant crimes, victim-offender relationship, and weapon choice (Litwin, 2004; Puckett & Lundman, 2003; Regoeczi et al., 2000; Wolfgang, 1958). Several studies found that homicides involving younger victims were more likely to be cleared compared to cases involving older victims (Mouzos & Muller, 2001; Regoeczi et al., 2000; Roberts, 2007; Wolfgang, 1958).

Interestingly, the majority of homicide clearance rates research internationally demonstrated very similar characteristics and results. For example, homicides that occurred within a residence were more often solved compared to those that occurred in public locations (Litwin, 2004; Litwin & Xu, 2007; Mouzos & Muller, 2001; Wellford & Cronin, 1999; Wolfgang, 1958). Litwin (2004), Litwin and Xu (2007), Mouzos and Muller (2001), Regoeczi et al., (2000), Riedel and Rinehart (1996), Wellford and Cronin (1999) and Wolfgang (1958) all recorded results that identified a significant increase in case closure if the homicide was co-committed within another crime. In 1998, Riedel and Jarvis reported that as the percentage of unidentified victim-offender relationships increased, arrest clearances decreased. Regoeczi and associates (2000) found gender impacted homicide case closure, in those cases with female victims were less likely to be solved than those cases with male victims.

Race as a major predictor for positive case clearance was reported in a number of studies. Wolfgang (1958) and Regoeczi et al. (2000) found that police cleared more homicides involving non-Caucasian victims than those with Caucasian victims, whereas Cardarelli and Cavanaugh (1992), Litwin (2004) and Litwin and Xu (2007) noted that cases involving Latino victims were less likely to be closed compared to cases with Caucasian victims. In 2007, Robert's results indicated no difference in homicide clearance rates based upon race. These inconsistencies could be attributed to differences in the type of data collected, level of data aggregation, time, location, statistical method, and model specification that are varied across the different research. For example, Kelchner and Kolnes (2008) argued that the probability of solving a homicide outside of the first forty-eight hours is severely diminished irrespective of other factors. This research suggests that there are two main reasons for this. Firstly, when there is no obvious connection between the victim and offenders after detectives complete a victimology, there is very little chance of identifying a person of interest (POI). Therefore, in stranger homicides, potential witnesses rarely exist due to the location and/or time the homicide was committed; for example, a homicide between unknown parties in a public place at 2am on a weekday – there is usually nothing but forensic evidence (if present) to assist police. In contrast, with numerous intimate homicides, the offender often contacts police, is found in situ at the crime scene, commits suicide, or evidence otherwise provides other clear links between offender and victim (Kelchner and Kolnes, 2008).

The second reason that detectives solve less "stranger" homicides is the increased difficulty of determining the offender's motive (Polk, 1994). The task for investigators in these homicides is to analyse the specific aspects of each individual case to draw out the relationship ties between victim and offender if any exist, which could arguably lead to establishing motivation. It can be argued the overall decrease in clearance rates longitudinally has been in some part due to the increase in stranger homicides. In comparison with intimate homicides, which are usually a product of a disagreement or conflict between the offender and victim and are often spur of the moment and not premeditated, stranger homicides often include a co-committed crime, such as robbery. These crimes are often well planned, synchronised, committed 'after hours' with 'third party awareness' in mind; and if the offender(s) is forensically aware, there is little likelihood that physical evidence will be left behind. All of these factors combined affect solvability and therefore clearance.

There were some distinct differences in the results of research reported in relation to firearms involvement in homicide. Litwin (2004), Mouzos and Muller (2001), Regoeczi and colleagues (2000) and Roberts (2007) all reported that when firearms were used to kill the victim, the police were less likely to close the case, whereas Riedel and Rinehart (1996) and Wellford and Cronin (1999) did not discover the same.

There has been a continued downward trend, over the past forty years, in clearance rates for homicide across Australia, and international research reports similar findings. Of this literature, the majority examined the causes of the decline,

for example, change in the types of homicide (Riedel & Jarvis, 1999); and some examined the determinants of homicide clearances (Cardarelli & Cavanaugh, 1992; Riedel & Rinehart, 1994; International Association of Chiefs of Police, 1995; Wellford & Cronin, 1999). Research by Davies (2007) examined homicide clearance rates "with a true longitudinal procedure", focused on the influence of the "authorising environment" on police responses to homicide (p. 32). Her quantitative analysis needed evidence from a qualitative case study to support her conclusions and does not include variables of homicide events.

Hsu's (2007) research differs from that of Riedel and Jarvis (1999) and Kelchner and Kolnes (2008) in that instead of determining the decline of homicide clearance rates by the type of homicide committed, for example intimate versus stranger, they compared the factors related to cleared homicides. Hsu (2007) compared police agencies with low clearance numbers to those with high ones and then used filters of agency size, budgets, number of police assigned to the job and the technology to which they had access.

Litwin and Xu in their research in 2007 concentrated on the longitudinal nature of the decreasing clearance rates. They used three multi-level models for three decades testing the dynamic relationships between homicide event variables, clearance rates and community level variables. These results present an in-depth illustration of the general decline. In contrast to this, the FBI's *Uniform Crime Reports* state the US has a clearance rate of 65% (Federal Bureau of Investigation, 2002). An international comparison with countries which *advertise* their clearance rate

percentage offers some interesting results: 32% El Salvador (Ponce et al., 2007), 50% Greece (Salfati & Haratsis, 2001), 68% Canada (Dauvergne & Li, 2005), 70% England and Wales (Richardson, 2001), 88% Australia (Mouzos & Muller, 2001) and 95% Japan (Roberts, 2007). Caution must be taken when reading these numbers due to how each country defines the terms 'murder/homicide' and 'cleared'[31].

When this research began in 2007, 2004 data were the most recent data available and showed that homicide clearance rates on average in Australia were 88% and in NSW, 83% (AIC, 2006). More recently, NHMP have reported that the homicide clearance rate for Australia is 94%, and for NSW, it is 89% (Chan & Payne, 2013), an overall increase in homicide clearance rates, whilst the incidence of homicide continues to decline (Davies, 2007; Litwin & Xu, 2007; Xu, 2008).

To date, the majority of research on homicide clearance, police practice in homicide investigations and solvability has been completed in the US, although a few have been conducted in other developed nations. Examples include examinations of homicide clearance rates in England and Wales completed by Innes (2003), in Australia by Mouzos and Muller (2001) and cross-national comparisons between the US and Canada conducted by Regoeczi et al. (2000) and the US and Japan (Roberts, 2008).

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[31] In the United States, there is a phenomenon called 'homicide cleared by exceptional means' which appears to bolster the overall clearance rates in certain districts and States. The definition of 'exceptional means' includes that the law enforcement agency must have: identified the offender; gathered enough evidence to make an arrest, charge the offender, and turn him/her over for prosecution; identified the offender's exact location; or have encountered some circumstance beyond the agency's control that prevented it from making an arrest. An example of a 'homicide cleared by exceptional means' would be a murder/suicide. Self-defence homicides also are considered cleared by 'exceptional means'. New South Wales does not use this terminology; rather, the term used is 'solved–other', such as the offender dying prior to proceeding to court (personal communication Baldwin 2008). This discrepancy in terminology has relevance when attempting to compare the situation in Australia with that in the United States, where one of every four homicide cases is closed via 'exceptional means' or 'administrative closures'. Additionally, there is a discrepancy in year reporting, where many US states report by calendar year, while the Australian NHMP data is measured by a July-June system.

Little attention has been given to the topic of location of the crime, so that offence locations, body 'dump' sites and why they are important to the offender are still not widely recognised or researched. Ressler and Shachtman (1992) as well as Douglas and Olshaker (1996) allude to the significance of victim targets, dumping grounds and the police investigations of these locations anecdotally in their memoirs. Research by Keppel and Weiss (1994) determined that there was a significant link between locations within a crime and information leading police to solving that crime quickly. They also found time and distance between crime scene and body location were significant.

Wellford and Cronin (1999) write about changes to police resources in the US and whether their ability to devote substantial numbers of experienced personnel and other resources to police investigations has diminished. They argue that existing literature documents deterioration in the percentage of cleared homicides and the probable cause of this phenomenon; however, it does not facilitate the development of new or altered law enforcement policies and procedures that may lead to increasing homicide solvability and clearance rates.

Research by Petersilia (1987) identified ways to triage homicide cases. Simply put, if specific solvability factors were present and collectable, police had a higher chance of closing the cases. They discovered police response times were not the major determinant of whether an on-scene arrest occurred; however, having a reliable witnesses present and having a member of the public report the crime

immediately were significant factors (Pate, 1976; Spelman & Brown, 1982; Van Kirk, 1978).

Adcock (2001) argues that the detectives responsible for investigating homicides believe that the solving of homicides centres on physical evidence and witnesses, yet they tend to lack the specialty training, in that general duties and senior police officers are traditionally not scientifically trained, and therefore, may be ignorant of evidential opportunities with a scientific element. Halloran, Hagan, Lister and Nicks (1992) and Schramm (2001) were police officers; their research and writing is not unlike Geberth's (1996) with a *practical* slant to it. They noted that over time, the focus of police investigation has moved from obtaining admissions from the POI to a more forensic or scientific based investigation, and prosecution. Halloran and colleagues argue that "...legislative and procedural changes have placed greater demands on the homicide investigator. Investigations are protracted and generally more difficult" (Halloran et al., 1992, p. 135). They also noted that, in their opinion, criminal profiling and advanced forensic practices would provide future investigators with more of a chance to solve homicide incidents.

Walton (2006) reported that advances in forensic science revolutionised the opportunities for increasing homicide clearance rates and especially unsolved homicide cases. Due to improvements in forensic science, investigators have the opportunity to re-analyse evidence and re-evaluate leads. These advances have allowed evidence that may once not have been considered important to possibly lead to the identification of an otherwise unknown POI, with such techniques as the use of

mitochondrial DNA to determine the maternal bloodline of an individual for the purposes of identification or linking a known individual to the crime scene or victim. As a consequence in today's technological society, homicide investigations rely heavily on scientific examination of evidence as well as standard investigative techniques (Mouzos, 2001).

For most homicide cases, detectives spend considerably more time preparing the case file for court than they do in identifying and charging the suspect (Innes, 2003). The initial, dynamic focus of the investigative process will often be completed within days or weeks, whereas the case preparation phase frequently takes up to 12 months. Formalising evidence and presenting it effectively at court is, then, a critical component of outcome success. It is therefore unsurprising that Brodeur (2010) described detectives as "primarily courtroom evidence managers as opposed to case solvers" (p. 214). The demands for evidence of a prosecutorial level and beyond reasonable doubt influence clearance rates, as cases can be classified by police as *solved following arrest*, but are returned to police as *unsolved* if the POIs are found not guilty or acquitted. This influence is not explored in the current thesis, since it relates to court procedures and processes, and was beyond the scope of the current research, but will be considered as a future research project.

Police practices and investigative procedures are significant predictors of homicide clearance rates (Wellford & Cronin, 1999). Variables related to law enforcement organisations examined included detective experience, education and training, their workload and police senior management's expenditure. As far back as

1977, Greenwood, Chaiken, and Petersilia found that the individual detective's experience was unrelated to the squad's homicide clearances, and 26 years later, Puckett and Lundman (2003) reconfirmed that. In contrast, Marché (1994) reported that detective experience was positively correlated to increased homicide clearance rates, particularly for larger police jurisdictions. However, Marché also found a negative relationship between detective workload and clearance rates, and Puckett and Lundman (2003) reported no significance in that relationship. Lastly, Keel and colleagues (2008) found that homicide detectives that had received and successfully passed formal training were positively associated with better clearance rates. Of note is that the theoretical or conceptual meaning of these variables is typically not explored and certainly has not been completed in Australia, and is a topic for future research.

In 2000, an international collaboration known as "The Technical Working Group on Crime Scene Investigation" concluded that many of the characteristics of the homicide itself had little or no effect on the overall clearance rates of police. They concluded that it was police policies and procedures that had the most significant effect. In contrast, research conducted in Chicago by Riedel and Rinehart (1996) concluded that the main distinguishing factor between a case being solved or not, was whether the homicide was co-committed. They argue that the other variables, such as age of the victim, gender and race lost significance when another crime occurred within the homicide event.

Keppel and Weis (1994) reviewed how the distances between important locations in the crime (such as body dump site, point of contact between the victim and offender) and the time between stages of the crime have an influence on clearances. They concluded that having information about time and location issues increases the chance of the crime being solved. For example, they state that knowing the site at which a homicide occurred will be of more use to the investigation than the site at which the body was dumped (if different). However, while Keppel and Weis argued that their findings have implications for the allocation of resources in homicide investigations, their research did not inform the procedures of investigation.

Polk (1994) suggested that this trend is reflected internationally, and has added to the complexities of homicide investigation. These complexities – the differences of stranger versus acquaintance versus intimate/domestic homicide – alter the ability of police to solve and clear homicide cases. Wellford and Cronin (1999) argued that this phenomenon has occurred due to three contributing factors. They noted that the types of homicides occurring are changing (e.g., domestic versus stranger). Additionally, there had been a variation in police resources over the period of their review. Finally, there were higher incidences of witness behaviour changing; for example, in their reluctance to participate or offering misleading accounts.

While important questions remain, the primary issue concerns why anyone should care about clearance rates. There are multiple reasons:

- Police efficacy
- Public safety
- Public belief in and acceptance of the police force's ability
- Budgets (government spending), how many police to hire, etc.
- A 'true' sense of justice for victims' families and punishment fitting the crime
- The extent to which non-closure of cases affects police morale overall and their capacity to do their jobs.

Compared to other industrialised nations, the US has a low rate of homicide clearance. For example, in 2002 the US homicide clearance rate was 65%, compared to 95% in Japan, 96% in Germany, and 70% in England and Wales. For decades in Australia, the percentage of homicides that police have cleared has gradually declined, a trend which defies advances in forensic technology, federal and state initiatives to deploy more police officers on the streets, overall budget increases and the creation of a *cold case* squad to investigate previously unsolved homicides. Interestingly, this trend has persisted even as the number of homicides committed in Australia has dropped. Around 75% of homicides are cleared by Australian police forces relatively soon after the offence and with limited investigative effort (Chan & Payne, 2013). In the other cases where more investigative effort is required to identify the Person of Interest (POI) and build a case against them, the consequences of investigative failure can be considerable, both in terms of public backlash and the cost to police resources (personal communications, Oxford, March 9, 2009).

Brian-Morgan (1990) suggests that media, politicians, police management and the general public need to be more aware of the issues relating to homicide clearance rates. He further argues that issues regarding centralised and decentralised homicide squads have marked effects on the working style, networking ability and overall capabilities of homicide investigators. There appear to be two significant sides for and against the centralisation argument: firstly, investigators who are decentralised are able to work more closely with residents, and LAC general duties staff, and by embedding themselves in their district, they can gather intelligence, create rapport with community leaders and build positive relations within the community that they serve. This assists the investigators when they need specific information to identify witnesses and establish relationships with informants, and as a rule, creates a beneficial relationship between the general populace and police. The opposing view argues that by centralising investigators, there are cost benefits, increased efficiency and shared expertise. Too often, this is translated into reduced resources without compensatory efficiencies (Greene, 1999), resulting in reduced clearance.

Wellford and Cronin (1999) did not regard specific characteristics of homicide cases as critical to understanding clearance rates, even though some characteristics demonstrated statistical significance in their own research. Crime clearance rates are considered by some to be indicative of successful police investigation and are frequently used as the clearest quantifiable indicator of effectiveness, despite the acknowledgement that they are an inadequate measure of police performance (Greenwood et al., 1977; Mensch & Talmud, 1998; Puckett & Lundman, 2003; Rapp,

1989; Regoeczi et al., 2000; Simon, 1991; Skolnick & McCoy, 1985; Turvey, 2006; Wellford & Cronin, 1999). Turvey (2006) determined that higher clearance rates are reflective of efficient and effective police investigations. Lower clearance rates are reflective of the opposite — and of a failure to control basic solvability factors. He further argues that if clearance rates were not important, law enforcement agencies would not need to manipulate their numbers to give the appearance of more clearances (Turvey, 2006, p. 1).

In contrast, using clearance rates as a measurement for police performance and comparison between jurisdictions and even nations is fraught, primarily because each police force may employ different methods of measuring their clearance rates. Additionally, individual police forces may have a different method of recording crimes as they occur or different criteria for determining case clearance or closure. A police force may appear to have significantly better clearance rates, simply due to its calculation methodology (personal communication, Baldwin and Beresford, September 15, 2008).

Rojek (1996) expressed the view that "during the past three decades, homicide in the United States has become less of a domestic, expressive, criminal event but somewhat more of a casual acquaintance, non-domestic, and instrumental criminal occurrence" (p. 105). An example of Rojek's argument from the Australian perspective would be the widespread and organised introduction of drugs into our society, which can be seen to have altered some motives associated with homicide. Violent clearing of rival gangs or distribution networks in city areas often results in a

homicide, which is viewed by those criminal entities involved as almost a business matter. Therefore, it could be argued that although the overall rate of homicide (per 100,000) has in fact shown little change over the past century, the characteristics of the homicidal events seem to have shifted (NHMP, 2006). Other examples of this are stranger abduction homicides, 'drive-by' shootings and more complex serial murders.

DeForest (2005) argues that even when police investigators want to investigate a homicide, they are hobbled by an overall ignorance regarding crime scene investigation, physical evidence, and forensic science. He believes that the physical evidence in most cases is poorly investigated and poorly documented, if at all; this opinion is supported by Turvey (2006). Marché (1994) argues that police have an increased rate of success when physical evidence is present, reliable and correctly collected. When this concept is combined with Wellford and Cronin's (1999) argument regarding proper crime scene investigation, the positive effect on techniques of homicide investigation becomes important to case solvability.

Bottomley and Pease (1986) suggest that media attention can affect the amount of resources and time that police management allocates a team to investigate a case. This is especially true for high-profile cases with impact on the thoroughness and the outcome of the investigation (Geberth, 1996). However, media attention does not extend to a sufficient number of cases to produce a large shift in overall clearance rates (Bottomley & Pease, 1986).

Pate (1976), Van Kirk (1978) and Spelman and Brown (1982) discussed the importance of police response times in terms of affecting clearance rates. It was not until the research conducted by Petersilia (1987) that the factor found to have the most significance was identified as the length of time that elapsed between the homicide event and the report of that crime to the police by a member of the public. Extending Petersilia's research, Keppel and Weis (1994) used the factor of time, but combined this with an additional factor, which they identified as the importance of distance between significant locations involved in the individual crime, such as the point of intersection between the POI(s) and victim(s) and the body disposal site.

They concluded that awareness of the combined factors of time and location by investigators increased the chance of the crime being solved. In cases where the body had been moved, they allocated greater significance to the site of the homicide event, rather than the site of the body's discovery, in solving the crime. Their findings on location were supported by Ressler and Shachtman (1992), Douglas and Olshaker's (1996) and Geberth's (1996) memoirs; they also concurred on the significance of location, but did not explore the element of time as a significant factor.

As early as 1971, Elliott and Sardino identified officer accountability, independent investigative squads, speedy deployment of police officers, and strong and respectful police-community relations as more important than the quantity of resources in achieving high clearance rates (as cited in Rinehart, 1994). Cloninger and Sartorius in 1979 investigated the impact that resource limitations imposed by financial constraints had on clearance rates in homicide and auto theft investigations

and found no statistical significance (as cited in Hunter, 1997). Other researchers also found these elements to have no significance, or at best limited significance, on clearance rates (Eliopulos, 1993; Greenwood et al., 1977). Further to this, Mouzos and Muller (2001) were quoted in a succinct and coherent explanation of homicide solvability in Australia. They identify the key formal concepts:

> although unsolved homicides account for 12% of all homicides, when compared to solved homicides, unsolved homicides are more likely to occur in the course of another crime, to involve a single victim (as opposed to multiple victims), and to take place in a non-residential setting. The victims of unsolved homicides are more likely to be non-Indigenous, in the labour force, aged 30 years or older, and not under the influence of alcohol at the time of the incident. Homicides in which the offender uses a firearm have a lower chance of being solved than homicides involving other types of weapons. (Mouzos & Muller, 2001, p. 7)

Understanding these results begs the question, whether the way that NSW police investigate homicides can be improved. To answer this question the process, variables, policies and procedures must be understood. Are there any factors that impact the Detectives more than others? An examination of factors positively associated with solving cases may assist them in improving the processes and procedures utilised within investigations. However, there was no possible way that the researcher could answer these question with any sort of validity or reliability without actually asking those who are empowered to investigate these matters.

Therefore, this section of the research sought to do just that, it examined how NSW State Crime Command (SCC) Homicide Squad investigated the homicide cases within their jurisdiction and what factors they felt directly affected their ability to positive clear cases.

Most previous studies testing and discussing police processes, offender variables (collected from inmates imprisoned) or crime scene and forensic procedures are not entirely suitable to address the issues related to homicide solvability factors and their impact on clearance rates due to their methodological limitations and lack of access to primary sources. Several recent studies (Borg & Parker, 2001; Litwin, 2004; Litwin & Xu, 2007; Regoeczi et al., 2000; Mouzos & Muller, 2001; Puckett & Lundman, 2003; Roberts, 2007) have demonstrated some connections between police process, victim characteristics, situational factors, and homicide clearance, however their research was based upon secondary sources, collected by others for different reasons and purpose.

Method

This new method section exists because the previous quantitative analysis could not answer to the practitioner's point-of-view. The researcher believed that to balance this study a qualitative review was imperative. The results in this chapter provide information that the previous, and final, chapters do not.

Acquiring the Sample

The results of this project would have been incomplete, and hence less relevant, without full access to detectives and their cases as the perspective of the practitioner was key in converting the anecdotal 'warries'[32] to empirically provable facts. After 11 months of negotiation which included a number of introductory letters, an interview with the (then) head of homicide, Chief Superintendent Geoffrey Beresford and the Inspectors of the SCC Homicide Squad, and a lengthy ethics application, the researcher was granted full access to all homicide cases between 1994 and 2013 that occurred within the jurisdiction of the state of NSW. The ethical concerns in the design and implementation of this research pertained to the commitment to "do no harm" and issues of informed consent, as well as undertaking to protect the privacy and confidentiality of participants and case files. For this research, informed consent was requested and received from the two participants in the pilot study. The process adopted for this thesis involved providing a written statement in plain English detailing the research project and providing relevant contact details and a written consent form.

[32] Warries = war stories or description of personal experiences as investigators.

> According to Stephen Mastrofski and Roger Parks, statistical studies that describe police behaviour may be useful, but they are not nearly as valuable to either practitioners or scholars as studies that also describe and analyse *why* police do the things that observers record. To understand the *why* of police behaviour, Mastrofski and Parks advise other researchers, one must go beyond statistics. Researchers must also ask the officers involved to explain their interpretations of the situations observed and the reasoning that led them to attempt to resolve them as they did. (Fyfe, Greene, et al.,1997, pp. 188-189).

Therefore it was decided to utilise a mixed-method approach for the purpose of this thesis. The previous chapter utilised quantitative statistical analysis, whereas this chapter will use the results of a qualitative survey to identify the factors that current investigators believe affect their ability to positively clear a case. This choice is also supported by Sergeant Venditto's (2005) statement:

> The investigation of crime is described by some as an accidental process, wherein the actions of the police have little to do with solving the crime and in fact describe the detective function as relatively ineffective in solving crimes (Keppel & Weis, 1994). Such assumptions are rarely based on qualitative measures or real experience and instead are often based on shallow interpretation of one-dimensional data. (p. 4)

The comparative, qualitative and case-based approach, which is favoured, and exemplified by Innes's (2003) study, ideally is undertaken by observing ongoing

activity in its course. However, there are significant obstacles to employing this approach to active homicide investigations. Practical and legal problems may cause huge difficulties to researchers and investigators alike. These investigations can be too extensive and their trajectories too uncertain for a researcher to be able to study many individual instances as they unfold, and legal issues of disclosure further complicate this matter. Therefore, the decision was made to survey NSW homicide investigators in order to ascertain the practitioner's view to provide a solid and balanced foundation for this section of the research.

The researcher formulated the methodology based on previous research conducted by Mouzos and Muller (2001), the only published study of homicide solvability in Australia. A list of solvability factors was derived from previous studies conducted in the United States (Geberth, 1996) and El Salvador (Ponce et al., 2007) and then turned into themes. The following areas were interrogated:

1. The main obstacles to solving a homicide
2. Critical aspects that a crime scene offers up to solve a homicide
3. Internal police organisational features that are important in the process of clearing homicides
4. External factors affecting police whilst trying to solve homicides
5. The reality and the role technology plays in solve homicides
6. The role 'time' plays in solving homicides
7. Process of identifying an initial POI

8. Difference between the 'pre-legal' basis of suspicion (police) and the legal case that establishes proof (DPP)
9. What role victimology plays
10. Opinion on unsolved homicides

The research strategy was formally submitted to and approved by Bond University Higher Education Research Committee (BUHERC) (Ref: R0652) and the NSW Police Force State Crime Command (SCC) Homicide Squad.

A meeting was arranged with the Superintendent of the SCC Homicide Squad to explain the scope of the study and arrange introductions to the squad. Interviews were conducted in an initial study with a restricted sample of two investigators of the squad to accommodate the constraints imposed by the operational tempo of the work of the homicide squad. The results of this study confirmed the validity of the solvability factors identified, and informed the content of the written survey for the large study of the investigators of the squad.

Given the nature of the research, making firm conclusions about the factors related to homicide clearances is problematic, partly because studies of homicide clearance rates have used different levels of analysis but also because they have employed many explanatory and analytical frameworks, examined different jurisdictions and have generally produced inconsistent results. Nevertheless, researchers have identified a variety of factors that may influence the likelihood that homicide cases will be cleared. While most of this research is applied, with little testing or development of theory, these factors can be distilled into two conceptually

meaningful domains within which theory can be developed, namely: environmental factors and organisational factors. For instance, Innes (2003) argues that to understand detective work, it is important to "understand the ways in which it is ordered by the organization and . . . the environment that frames the organization" (p. 15).

With this in mind, semi-structured interviews were deemed the most useful tool by which such qualitative information could be collected from NSW SCC Homicide Squad members. However, this strategy was not feasible because of the operational tempo of their work environment, encompassing court appearances and the highly unpredictable nature of homicide investigation work. As a result, a survey was designed, modelled on the initial interview questions (see Appendix C). This survey did not adhere to standards in relation to validity and reliability of what is deemed a 'proper' questionnaire (Neuman & Wiegand, 2000), but did fulfil the needs of data collection in order to answer the research questions. Moreover, this type of survey design also ensured distribution within existing ethics approvals. Main findings were related to variables around training, teamwork and resources. These, together with the results from the previously mentioned data analyses, will be discussed in depth later in this chapter.

On the advice of the Homicide Squad Commander to ensure confidentiality, the survey, comprising 12 questions, were distributed electronically to the squad members for completion. The completed surveys were printed and submitted anonymously by the participants to an agreed location. The results were collated

and analysed as qualitative data. Analysis of this data identified variations in procedures used by investigators attending a homicide crime scene. Informed by the results of this analysis, a matrix was created as a checklist of activities that an investigator should complete at a homicide scene, incorporating factors which when identified at a crime scene could increase the capacity for investigators to solve the crime or open new lines of enquiry.

A qualitative data analysis was undertaken on survey data collected to focus on the interrelated aspects and issues identified in the datasets (Bachman & Schutt, 2008). Based on these conclusions, the matrix was reviewed and refined, with the addition of activities associated with the identified predictive solvability factors. The survey was completed by 53 participants from a total of 65 investigators, of whom, 96% were male (n = 51) and 4% female (n = 2). Their experience ranged from three to twenty-nine years of service, and covered all ranks from Detective Senior Constable to Detective Chief Inspector.

Ethics and Access

As a civilian junior academic researcher, there were some very distinct challenges, both positive and negative, when approaching Australia's largest state police force and asking for access, not only to their staff but their current records, archives and extensive databases. The acceptance of the key stakeholders accommodating the researcher in the offices of SCC Homicide Squad was extremely important in that relationships, trust and understanding needed to be developed and maintained without the researcher losing focus or objectivity. Scraton (2004), Olesan

(2003), Kemmis and McTaggart (2000) all wrote on the topic of the *outsider* (researcher) and their *status* whilst undertaking qualitative research.

Gaining the trust, favour and understanding of the Squad was initially difficult, but as Gerson and Horowitz (2002) note, maintaining it over a six-year period was substantially harder. Securing access to this elite group of seasoned police investigators and then proposing to them the benefits of their participation could have been particularly difficult and time-consuming, but the assistance of the Commander of Homicide and the manager of Leadership and Development (NSWPol) made the process and rollout significantly easier. This research constituted unprecedented access to any homicide police in Australia.

Results

Question One

With regards to homicide solvability, what do you consider the main obstacles to be in achieving a result and why?

Table 3
Main Obstacles

Category	Total
Resources – infrastructure	15
Witness	14
Evidence	12
Professionalism	11
Resources – money	6
Resources – time	6
Relationship	4
Paperwork	3
Arrest	2
Criminal – forensic awareness	2
Jurisdiction	2
Motive	2
Total	79

Question Two

Rank the following items in order of importance (1 highest – 7 least) that assist you in solving a homicide.

1. Evidence (n = 53) – Any physical evidence found anywhere at any time that could be found at a crime, on scene a victim or an offender.

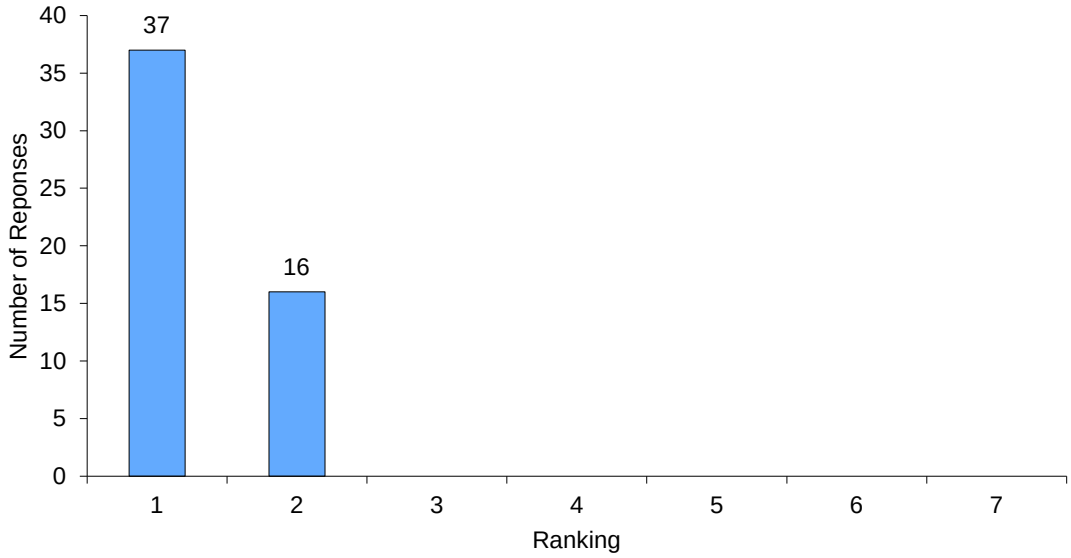

Figure 6. Ranking of evidence.

The results of this question clearly indicate that homicide investigators prioritise physical evidence above and beyond everything else. This in itself is not proof of a cognitive bias on behalf of individual police officers, but rather reflects the reality and clear expectation that these are the type of evidence allowed and expected in a court for the purpose of prosecution.

2. Witnesses (*n* = 53) – Any person who is either an eyewitness to the crime or has information available about what happened, including either the victim or the offender.

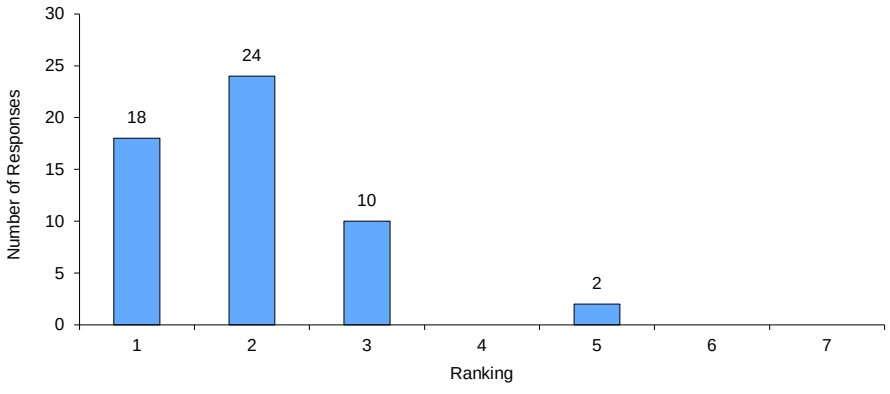

Figure 7. Ranking of witnesses.

3. Training (n = 50) – Any classes or lectures the police have received after they completed the basic police academy training that was related to police work or investigations.

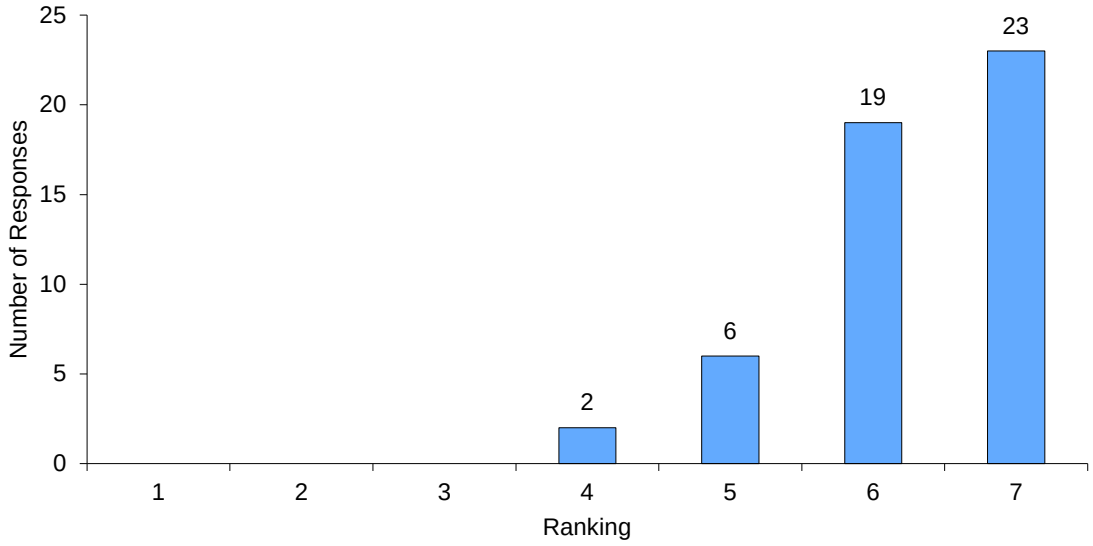

Figure 8. Ranking of training.

4. Experience (n = 51) – Self-explanatory

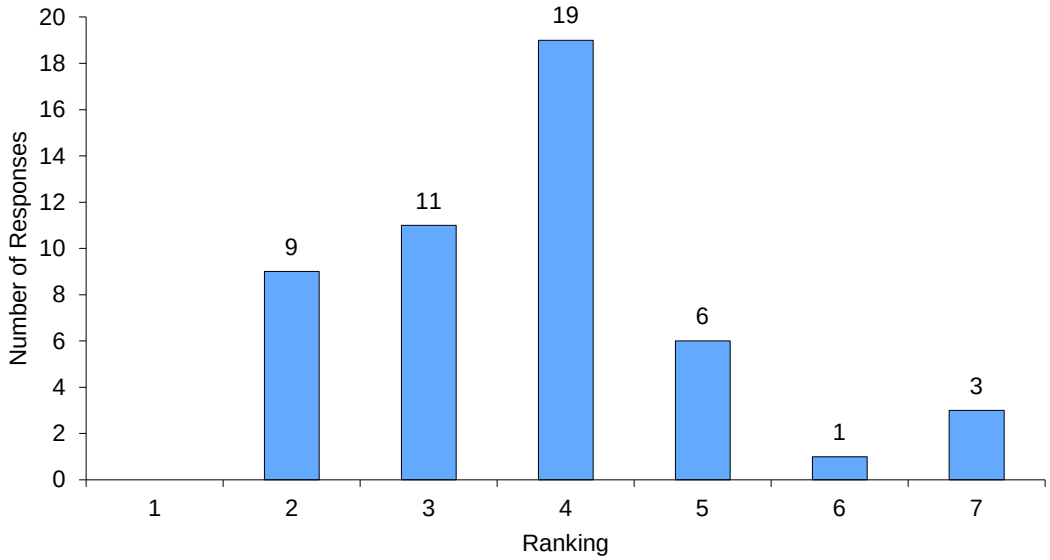

Figure 9. Ranking of experience.

5. Response time to crime scene (*n* = 53) – The *average* length of time it took the detectives to respond to the crime scene in the last 6 months.

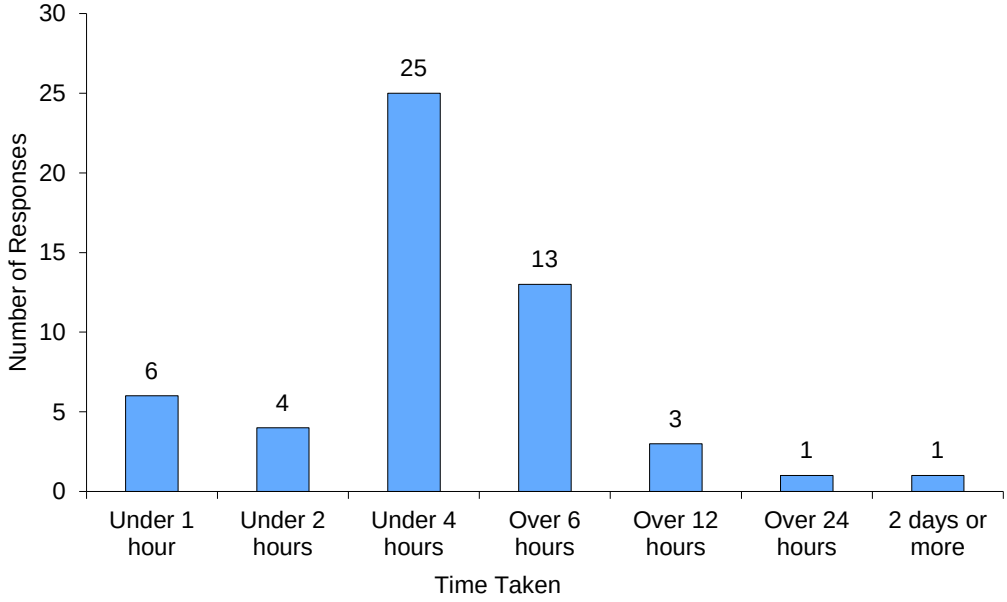

Figure 10. Ranking of response time.

6. Relationship (*n* = 29) – Refers to the significance that an investigator places on a known victim-offender relationship (however brief or casual it might have been).

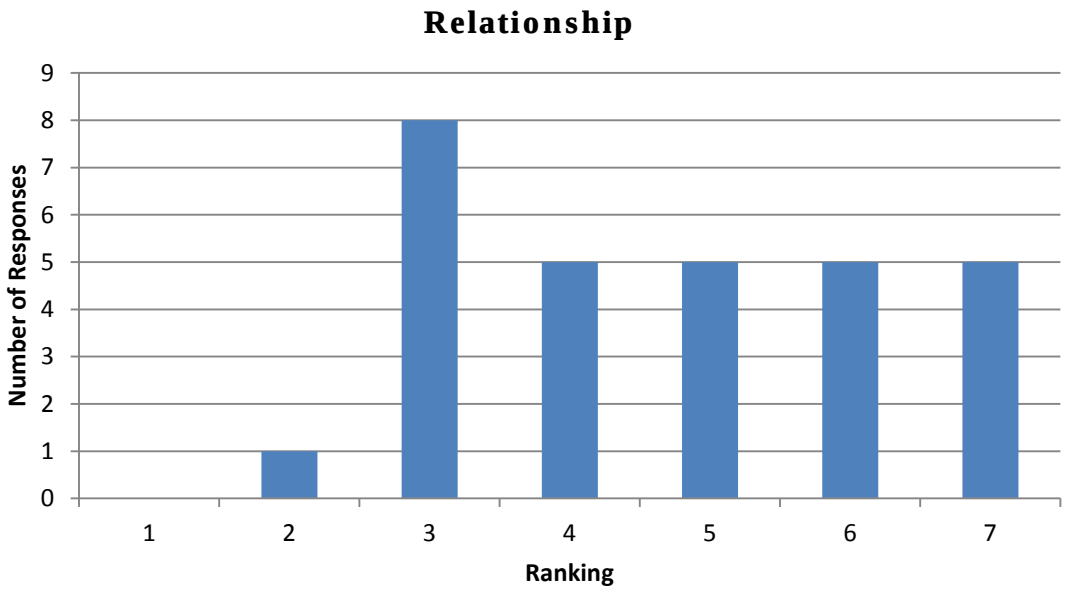

Figure 11. Ranking of relationships.

7. Teamwork investigative approach (n = 50) – Refers to the type of response by the detectives and to whether or not it was a team effort or conducted by a single individual.

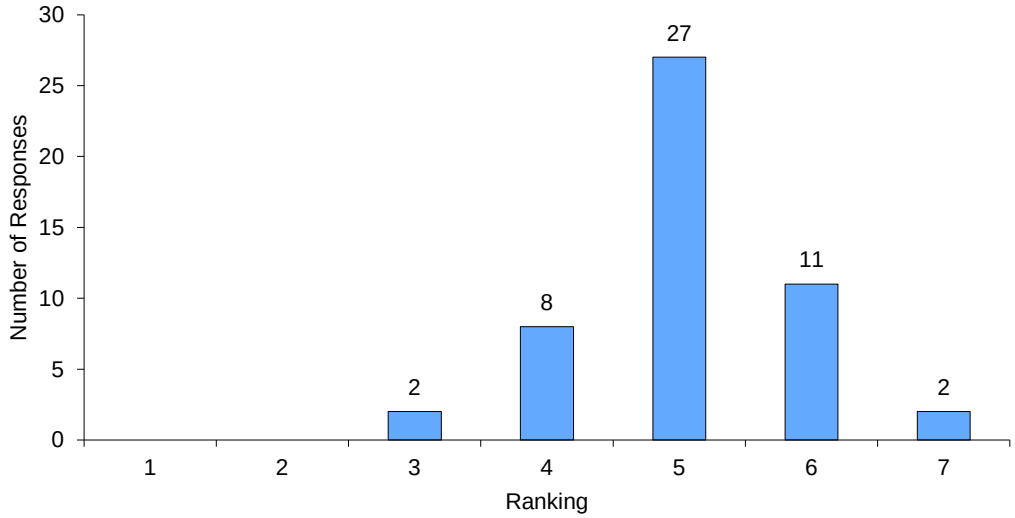

Figure 12. Ranking of teamwork.

Question Three

What are the three most important aspects at a crime scene that enable you to solve the homicide?

Table 4
Aspects of Crime Scene

Category	Total
Presence of physical evidence/preservation	50
Skill, aptitude, and thoroughness of scene examination	34
Communication with witnesses at a crime scene	17
Exhibit management	14
Canvass and CCTV	12
Protection from contamination	9
Transparency and competency of police	7
Identity of deceased being known early	5
Early involvement of SCC Homicide	3
Location of crime scene choice by offender	2
Record of information	2
Motive and circumstances	1
Total	156

Question Four

Rank the following items in order of importance (1 highest – 7 least) regarding the internal police organisational features that you consider to be important in the process of solving a homicide?

1. Policies *(n* = 45)

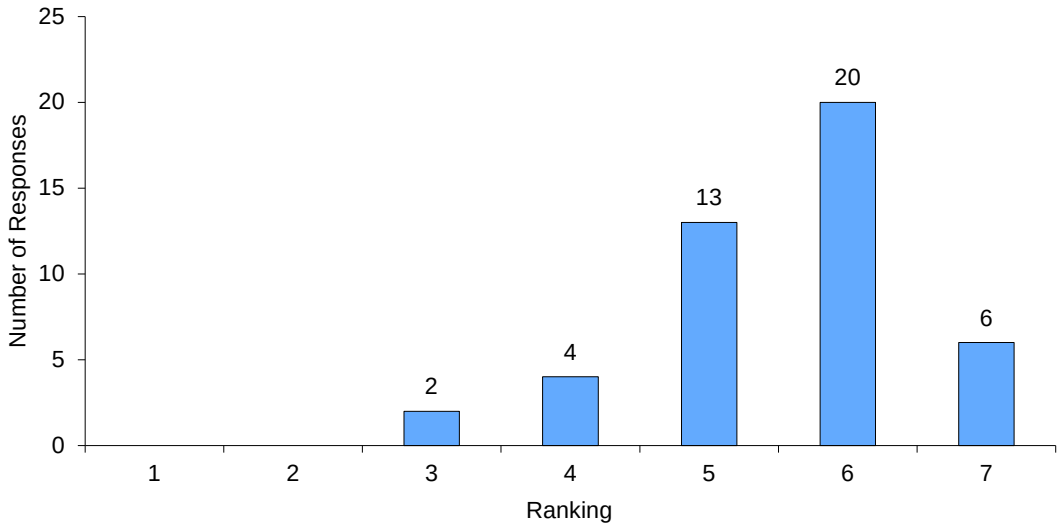

Figure 13. Ranking of policies.

2. Staff Resources (*n* = 53)

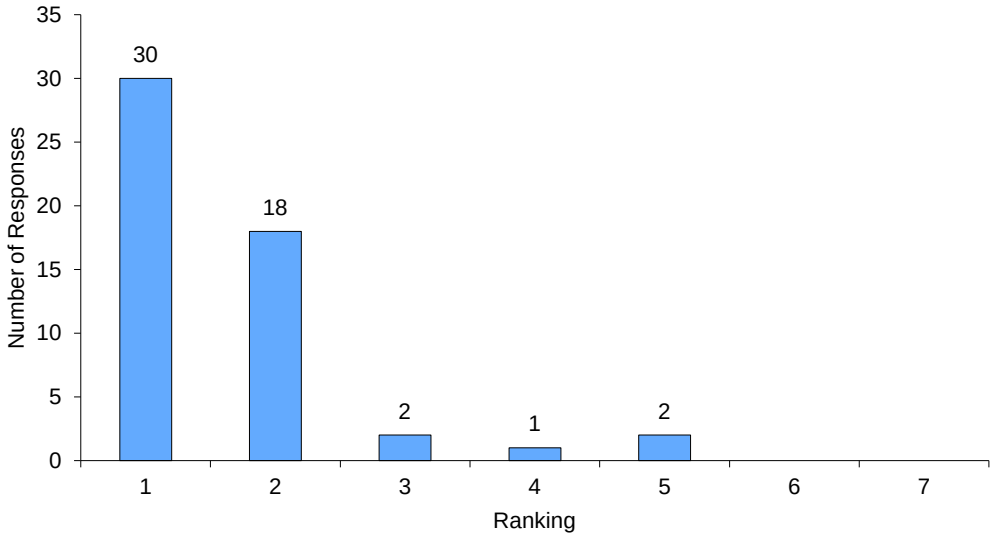

Figure 14. Ranking of staff resources.

3. Specialised training (*n* = 50)

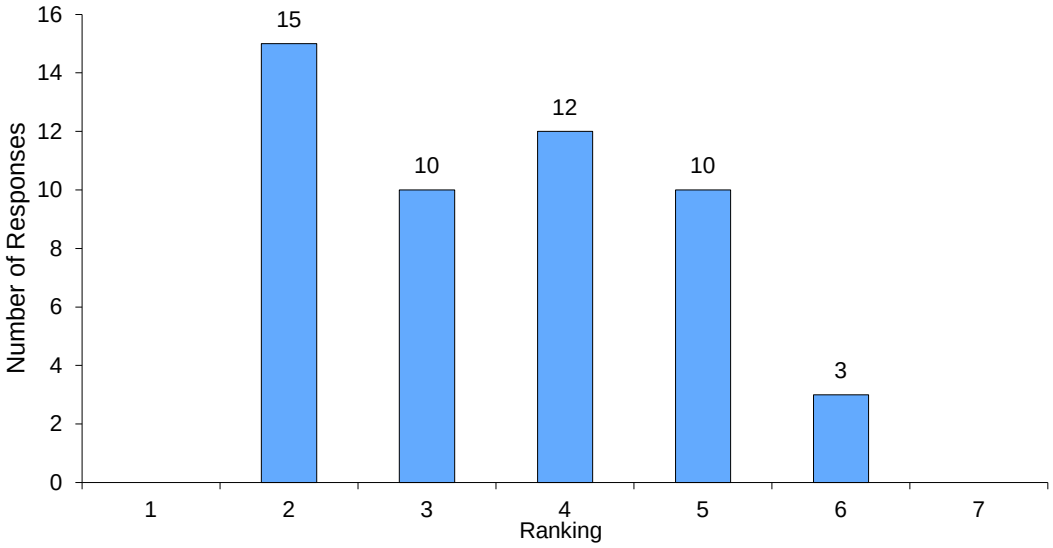

Figure 15. Ranking of specialised training

With changes in information technology, the use of information management systems became a focus of research, especially the compatibility of systems across jurisdictions and agencies (Polk, 1994; Mouzos, 2001d; Schramm, 2001). Difficulties

often arise when different jurisdictions or different agencies within the same jurisdiction try to merge incompatible databases whilst continuing to deal with new incoming information. These issues are increasingly critical when dealing with specific types of homicides, such as gang-related, serial murder or mass murder where there is a multi-agency approach to the detection and apprehension of POIs in 'real time'.

These advancements may have little impact unless police officers are adequately trained to realise the potential of the technology and understand its practical applications. Besides police officers not being adequately trained, this author would suggest that technology has advanced so fast and is costly to the point that many departments have been unable to keep up with, or can afford to employ, these advancements. Adcock (2001) argues that the detectives charged with investigating homicides believe that the solving of homicides centres on physical evidence and witnesses, yet they severely lack the specialty training, in that general duties and senior police officers are traditionally not scientifically trained.

4. Equipment (n = 48)

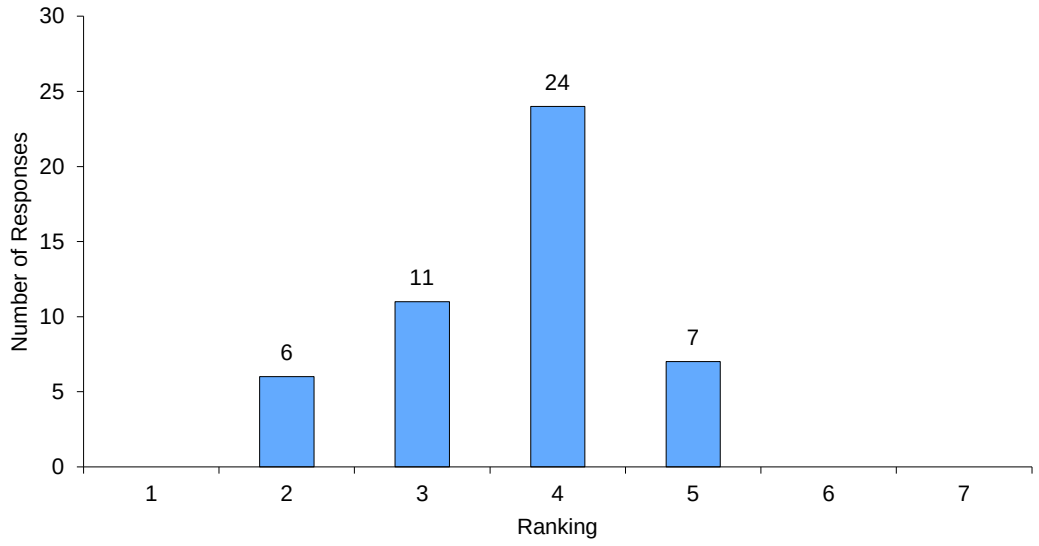

Figure 16. Ranking of equipment.

5. Specialised personnel (*n* = 45)

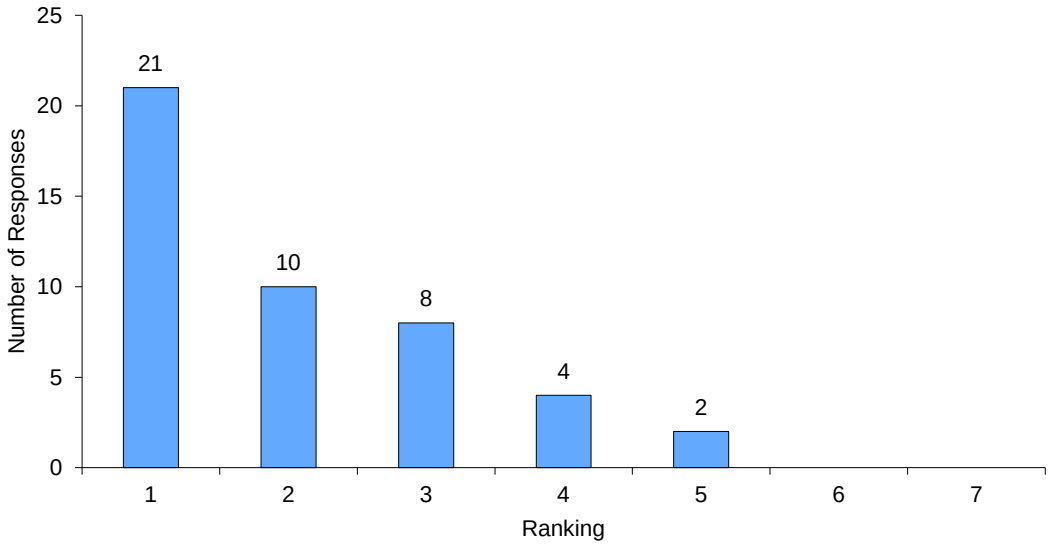

Figure 17. Ranking of specialised personnel.

6. Case management strategies (*n* = 45)

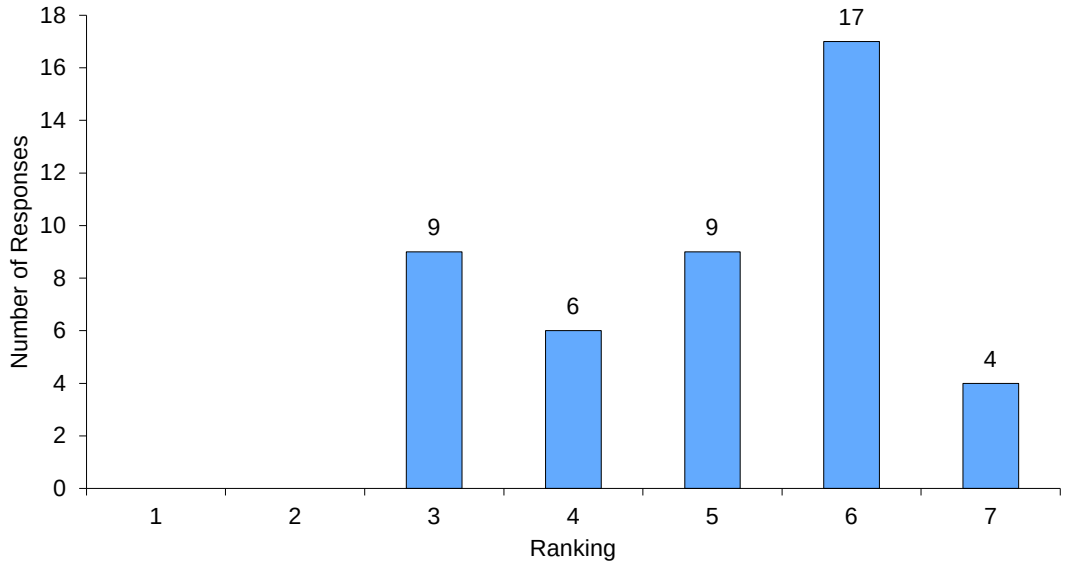

Figure 18. Ranking of case management strategies.

7. Other factors – please state (*n* = 54)

Table 5
Other Factors

Item	Total
Money over time	7
DPP advice	7
Media	7
Time allocated	7
Poor responses from Local Area Command due to finance	7
Officer in Charge	6
Budget	5
Special Services	4
Cost	3
Budget	1
Total	54

Question Five

What could be done specifically by detective units or police departments to improve homicide clearance rates?

Table 6
Suggestions for Improvement

Category	Total
SCC Homicides own all state homicides	24
More resources in initial weeks of investigation	22
Retention of staff at SCC Homicide Squad – no rotation	15
Training and Development for police	13
More emphasis on police work, less bureaucracy, easy to use legislation	6
Greater funding for informant management, covert electronics and forensics	3
Regular reviews and retesting of exhibits	3
SCC Homicide should maintain ownership of matter until completion	3
Easier installs of electronic devices etc.	2
Employ civilian staff in permanent role to assist with maintaining investigations on e@glei and to assist in brief preparation	2
More exhibit storage, mass storage facilities. We shouldn't have LAC throwing away exhibits due to lack of space and or expense	2
Consultation with 'operational' police to advise on homicide specifics	1
Create an Informant Handling Unit to enhance ability to infiltrate major crime groups	1
Decrease the time in relation to getting analysis results returned	1
Defined roles between SCC Squad and LAC investigators so as not to impede decision making	1
Establish a dedicated Crime Scene Team – fingerprints recently established the Special Location Recovery Unit	1

Category	Total
Nothing more can be done – SCC Homicide Squad are dedicated and determined	1
Operationally focused Missing Persons Squad	1
Victim care management – better	1
Total	103

Question Six

What role does the public play in solving homicides?

Table 7
Role of the Public

Category	Total
Provide crucial evidence to explain the circumstances of the crime via canvas	34
Observe day to day activities of victim	22
Supply vital information via media appeals or 'Crimestoppers'	7
Ongoing support and commitment through court proceedings is vital	5
Role is decreasing due to CCTV, DNA and other scientific evidence	3
Ensure investigations stay current	2
Generally, very little	2
Provide critical information to new lines of enquiry	2
Public pressure can assist legislative change	2
Total	79

Question Seven

What role can technology play or should technology play in helping solve homicides?

Table 8
Role of Technology

Category	Total
Examine and analyse to obtain factual data, i.e., DNA, CCTV, calls made, movement patterns, MO	21
Extremely important	17
Management needs to resource budgets to get speedier results and up to date equipment and staff to use it	10
LD and TI assist police in finding out who is involved and where they are	6
Can be extremely useful but an over reliance can undermine basic fundamental investigative practice	4
There is a need for investigators to continue to explore advances in technology in respect to investigate techniques	4
If technology were used without legislative impediments, a large number of unsolved homicides would be resolved, i.e., Compulsory DNA database	3
LD and TI assist to obtain admissions (excellent for juries)	3
Advancements in technology such as DNA profiling is critical, especially with criminals aware of police methodologies	1
Improvements in technology will continue to produce more detailed evidence – this may have an adverse effect at court as it may be too precise – creating doubt	1
Monitoring is so complicated that it becomes impractical (chat rooms, emails, etc.)	1
One of many facets	1
Technology is under-utilised as a lot of investigators are unaware of what is available to them	1

Category	Total
Total	73

Question Eight

What role does 'time' play in solving homicides (i.e., time it takes to be reported, magical '48 hour rule' to develop initial leads, etc.)?

Table 9
Role of Time

Category	Total
48 hours are crucial	35
First 72 hours are crucial	6
Time can assist investigators, that is, breakdown of relationships regarding alibis	6
Varies – time needs to be managed effectively	5
Undefined	3
No answer	2
Time important (re: resources and staffing in protracted matters)	1
Total	58

Question Nine

How long does it take to identify an initial homicide suspect on 'average'?

Table 10
Average Time to Identify

Category	Total
No average (varied)	11
Undefined	10
Less than 24 hours	7

Category	Total
Less than 48 hours	7
24-72 hours	5
12-72 hours	4
Up to 3 weeks	2
3 days	1
Stranger – organised crime	1
Less than a month	1
Less than an hour	1
Less than a week	1
No answer	6
Total	57

Question Ten

How much of a gap is there between the pre-legal basis of suspicion and the legal case that establishes proof?

Table 11
Time Between Suspicion and Proof

Category	Total
Undefined	22
2- 20 days	5
2 years or more	2
1 year	1
Minutes – hours	0
1 day	0
30 days	0
No answer	4
Total	34

Table 12
Comments Added by Participants

Category	Total
Gap is extensive due to trying to convince the DPP to go forward with matter	8
Not much of a gap – up to the investigator to go from gut to proof	8
It varies and can develop with the investigation	5
Depends on whether you are a lawyer or a police officer	1
Large gap – Coroner ceases inquest under S19 DPP then 'no bills'	1
Total	23

Question Eleven

What information about the victim is obtained?

Table 13
Victim Information

Category	Total
Full victimology	27
Relationship/s (friends, lovers, family)	23
Movement/s (include timeline)	14
Family	14
Lifestyle (hobbies/vices/habits)	14
Financial history	13
Criminal antecedents	10
Occupation/s (work history)	9
Associates at time of incident	8
Communication/s (records)	6
General History	6
Medical history	5
Unanswered	5

Category	Total
Scientific/forensic evidence	5
Vehicle/s (licence details)	4
Sexual preference/s (affairs)	4
History of conflict (enemies)	4
Case relevant	4
Business dealings	4
Demographics	3
Residence/s	2
Personality (behaviours)	2
Crime scene location (why was victim there)	2
Motive for homicide	2
Physical appearance	2
Dependencies (drugs, alcohol)	1
Risk factors	1
Places frequented	1
Offender	1
Responsibilities	1
Staged crime scene	1
Total	198

Question Twelve

In your opinion why do some homicides remain unsolved?

Table 14
Opinions on Unsolved Homicides

Category	Total
Inadequate resources (money and technical)	28
Physical resources (staff, time allocated)	25

Category	Total
Eye witness (or lack of)	21
Physical evidence	19
Inexperienced Officer in Charge	14
Lack of forensic material	13
Public assistance (delay of notification)	13
Personal commitment to job (ability/incompetence)	12
Inadequate crime scene management (exhibit continuity)	11
Poor initial investigation	10
Forensic awareness of POI	9
Inadequate canvassing	7
Legal proofs	7
Stranger homicide	7
Lack of motive	6
Individual case management	5
Tunnel vision – fresh eyes fresh ideas	5
Lack of co-ordination/communication between police units (unsolved and missing persons)	3
Organised involvement	3
Suspect rights – due process	3
Lack of sympathy (for victim) by family/friends	2
Offender isolated; doesn't speak or share	2
Police 'luck'	2
Police don't take risks	2
Some homicides are unsolvable	2
Victim's lifestyle	2
Arrest over conviction	1
Initial response inadequate	1
Lack of confessional material	1

Category	Total
Lines of inquiry fully exhausted	1
Total	214

Discussion

The search to recognise and connect the full range of investigative procedures and police processes that have previously been found to correspond with high clearance rates meets a number of methodological trials (Addington, 2006). The effects of these factors are presumably interactive, not independent. The majority of the factors have not been studied systematically and therefore much remains to be learned. Comparatively little methodological research by criminologists; psychologists or sociologists regarding how criminal investigations are carried out has been completed (Newburn, Williamson, & Wright, 2007). It has been argued that this is attributable to a lack of opportunities for academics and police to work in conjunction with one another for reasons of litigation and operational policing procedures, transparency and trust (Adcock, 2001).

This section of the police chapter, the Discussion, will centre on major themes discovered in the results of the NSW Police SCC survey results. The completed surveys were analysed in order to identify the major themes that homicide investigators considered to be important in solving their cases. Further qualitative analysis identified a number of commonalities within the detectives' answers[33]. The themes identified were:

- Forensic evidence
- Information processing
- Management influences and administrative issues

[33] It should be emphasised that the discussion which follows is based on the major themes identified in the questionnaires, and may not necessarily reflect the views expressed in every questionnaire. While there were no major divergences in views, a number of minor divergences were identified and are highlighted.

- Personnel
- Resources – human, financial and technological
- Response time
- Witness engagement.

Forensic and Crime Scene Evidence

NSW State Crime Command Homicide Squad members rated the collection and use of forensic evidence as the most significant factor in solving a homicide case. Some respondents emphasised that locating the body was not essential for the homicide to be solved, while others thought that it was the most significant factor in solving a homicide. The most important crime scene factors also included the necessity to rapidly seal off a crime scene, thus facilitating the conservation and collection of evidence, as well as the detectives being able to examine the victim in situ. Detectives also recognised that protecting the scene would minimise potential threats of contamination by limiting the number of people who entered the crime scene. These findings are supported in Australian research by Mouzos (2001), in the US by Geberth (2006) and the UK by Innes (2003).

Existing research currently lacks any kind of systematic review of investigative practices that influence clearance rates (Schroeder & White, 2009). For example, a number of major jurisdictions in the US place great confidence in complex, state-of-the-art technologies, such as automated fingerprint systems and DNA analysis. While there appears to be anecdotal evidence on the effectiveness of these technologies, there is currently no research that suggests the police are better at solving homicides now, using these technologies, than prior to their development

and introduction within significant investigations. Research in this area for Australia does not appear to have been conducted; however, New York City research in 2008 presented findings that concluded that homicide investigators used DNA analysis infrequently, even when they had samples from the crime scene that were appropriate for such analysis (Schroeder & White, 2009). It is hypothesised that this could be due to the significant costs involved, the time needed for analysis, reports and results recorded and the difficulties of getting appropriate experts to give evidence in court proceedings.

Information Processing

The capacity for police to access, probe and examine information from multiple sources has a direct effect on whether a case can be closed (Bock & Nelson, 1988; Rinehart, 1994). The NSW Homicide Squad results indicate that the type of information they received and handled was significant to their ability to close their cases. These results are supported by research conducted by Keppel and Weis (1994) and Hunter (1997). The most significant types of information for the NSW Homicide Squad were reported as (in no particular order):

- Where the victim's body was found
- The site where the POI initially targeted the victim
- The site where the victim sustained the lethal injuries
- The site where initial contact between the victim and POI occurred
- The place where the victim was last seen alive.

When all of these five significant pieces of information were known, NSW Police State Crime Command Homicide Squad had an average 83% clearance rate in

the five years from 2007, when this research commenced. Keppel and Weis (1994) studied the relationship between time and distance from where the victim was last seen alive and where their remains were recovered from, and discovered that the results were significant to increased case clearance. This type of research has not yet been completed in Australia; however, this researcher has commenced further study in this area.

Resourcing and Administrative Issues

The most significant variables identified by survey participants were the availability of sufficient and consistent resources. Examples of these variables in no specific order are:

- Sufficient time to devote to each individual investigation
- Appropriate numbers of experienced detectives allocated for all cases
- Overtime, available when required
- Support staff, both administrative, general duties police officers and management
- Analysts for intelligence products
- Cooperation between teams of Detectives from Local Area Command (LACs) and SCC squads, as well as from other agencies such as Departments of Community Services, medical, legal and other welfare and support agencies
- Effective communication between all agencies, staff and the police hierarchy.

The participants indicated that a lack of staff decreased their chances of clearing cases. In the squad members' opinions, budget limitations directly translated into

reduced staff in the long term[34] of the investigation process, which in turn increased the individuals' workloads, with possibility of translating to a decline in the overall quality of investigations. In the only other Australian-based solvability research, Mouzos and Muller (2001) recorded the following comment from a Detective:

> All murders are solvable if there was sufficient time to work solely on one murder at a time and with sufficient resources. Many avenues of enquiry never get done due to a fresh homicide being committed. (p. 5)

During discussions this author conducted with Squad members in relation to the quotation above, the majority of the Detectives (89%, n = 47) agreed with it. However, recognising limitations in funding, time pressure from the general public, the media, politicians, senior police hierarchy and most notably the loved ones of victims, and the constant pressure to deal with the next job that arose, they did not consider the quote realistic or achievable.

Personnel

The influence and function of general duties police officers versus detectives have often been debated, both by academia and practitioners. Skogan (1979, as cited by Hunter, 1997) posited that the main responsibility for closing cases lay with the general duties officers, as they received the "000" calls, appeared first at the homicide scene, conducted the preliminary interviews, and also decided on whether adequate, valid and reliable evidence were present to effect an arrest. In contrast, Reiss (1971) found that due to the fact that detectives are responsible for handling and administering paperwork and interacting with POIs, they had more influence on

[34] For the entire length of the case, as opposed to the first fortnight.

clearance rates. Studies by both Eck (1992) and Riedel and Rinehart (1994) reported that general duties police and detectives working as a team were vital to affect positive case clearance, given that both initial and follow-up investigations affect closing cases.

This research discovered that Squad members believed that more cases would be closed if more detectives were available for the entire time that a case ran, as opposed to the first fortnight or month. The majority of the participants noted that they almost always had significant staff numbers, both detectives and general duties initially; however, within a fortnight to four weeks, the bulk of the staff was returned to their original job role at the LAC or Squad. Detectives felt that this slowed their ability to manage information coming to their attention, process data and complete critical jobs, such as canvassing and taking statements.

Response Time

There appears to be no overall agreement in the literature regarding homicide investigations as to the significance of response time (Gerberth, 1989, as cited by Hunter, 1997; Greenwood, Chaiken, & Petersilia, 1977; Hunter, 1997; Kansas City Police Department, 1977, as cited by Rinehart, 1994). Results from the survey demonstrate that squad members believed the faster that police arrived at the scene, the more likely that they would be able to protect potential physical evidence from becoming lost, destroyed or contaminated. They also believed that the possibility of finding the POI or likely witnesses remaining at the crime scene would be high. On average, it took the majority of detectives at least four hours to arrive at the scene and commence work.

Witnesses

Results show that Squad members believed that the presence of a reliable witness was the most significant factor in solving a homicide in NSW. This finding is supported by extant research identifying witness information as being critical to successfully clearing a homicide (Corwin, 1998; Geberth, 1996; Greenwood et al., 1977; Mouzos & Muller, 2001; Reiss, 1971; Riedel & Rinehart, 1996; Wellford & Cronin, 1999, 2000). It follows that the opposite to this is also true, in that a decrease in the willingness or reliability of witnesses to provide police with useful information during an investigation could be correlated to declining clearance rates, as found by Wellford and Cronin (1999) and Witkin, Creighton, and Guttman (1994).

Results indicate that the main impediments to achieving higher homicide clearance rates were the lack of reliable witnesses cooperating with the investigation and also public apathy. The detectives' personal ability to collect and scrutinise information provided by potential witnesses, POIs or family members results in a more proficient detective. Without this skill, arrests and convictions were difficult to achieve. In casual discussions with the participants, they noted the difficulties that Hollywood-style television, films and books have caused by depicting POIs successfully outwitting police in complex and unreal storylines, as well as vicariously educating viewers/readers on forensic techniques, making the public very aware of police methodologies for detecting and solving serious crimes. As an example of this, detectives discussed the fear of retribution that witnesses to events of stranger or gang homicides communicate. Other witnesses may have been involved in actively provoking the violence that led to the fatal outcome and were reluctant to come

forward due to their complicity in the event; these results are supported by extant research (Black, 1980; Cardarelli & Cavanaugh, 1992; Davies, 2007; Riedel & Jarvis, 1999; Riedel & Rinehart, 1994; Wellford & Cronin, 1999; Xu, Fiddler, & Fleming, 2005).

The final aspect of concern to the detectives, in relation to witness involvement, is public apathy. In the past, homicides were considered as extreme, traumatic and fundamentally abhorrent and would send "shock waves" throughout the community. Survey participants commented that previously, the public had wanted to help police and would offer whatever assistance was required; whereas now, there is a sense of apathy and a reluctance to become involved. This could possibly be due to:

- concern for their own welfare and safety, or that of their family members
- distrust of the criminal justice system
- the length of time spent sitting at court awaiting their turn to give evidence
- the aspect of opening themselves and their previous actions to police scrutiny and therefore possible criminal charges.

Prosecutorial and Judicial Decision-Making

NSW Homicide investigators were affected by external influences which they had little, to no power over. Those influences came in the guise of agencies within the criminal justice system, such as the Director of Public Prosecutor's (DPP) office and the courts themselves. This is important information to understand as although the police consider a case cleared when they make an arrest; if the DPP do not believe

the case has enough weight to win in court they will not prosecute. In terms of the court, there are cases that have been deemed, by police and DPP, strong enough to determine guilt yet juries acquit or find the POI not guilty and therefore the cases are returned back to the SCC Homicide Squad into their unsolved homicide squad for review. In saying this there was no evidence, discovered during observation or conversations with the investigators, that prosecutorial and judicial decision-making affected the investigators of NSW homicide squad to any great affect.

Conclusion

This chapter has sought to examine the intricacies of solvability factors and their direct relation to homicide clearance rates. The research shows that the NSW SCC Homicide Squad consistently achieves homicide clearance rates above 80%. The chapter also presented the results of the survey given to the NSW State Crime Command Homicide Squad members (2007). Section one presents detectives' opinions gathered through the survey process. The purpose of this SCC Homicide detective survey was to identify what they as individuals believed were the main and basic requirements needed to solve a homicide. An examination of the complexities relating to the population of NSW, social and cultural change over decades, and the effect that has had on homicide investigation and clearance rates within the state, was performed. Direct correlations are made between the reasons for public apathy and a witness's subsequent reluctance to become involved in a homicide investigation. This chapter has investigated solvability factors, police resources, and external pressures that in combination stop police achieving higher clearance rates for homicide. During the research, further questions were raised in

relation to the role of a victim in homicide, the value of the victim, and whether the Applied Victimology matrix could assist police in increasing their clearance rates.

Chapter 4:

Testing Identified Solvability Factors on Two Homicide Types

> With each case comes enormous expectations from families, politicians and the media. "Sometimes the expectations are unrealistic and that's hard…some cases take days, others years. We can't go and get DNA results within three hours," he said. "We can't put something in the computer and 'poof' it spits out the offender." The pace of the 24-hour news cycle has also added pressure. "It doesn't take too long most of the time to know exactly who's done it and why, a lot of the time we have very strong suspicions about who is involved, but we need evidence." This year the squad has dealt with a number of horrific child murders and an increasing number of organised-crime executions. Although about 70 per cent of cases were domestic related, gang conflicts in south-western Sydney were eating up many investigation hours. "They are hard. They are long term, [and] people don't talk." But as long as people had access to guns, the shootings would continue. (Partridge, 2013, p.1)

Introduction

This chapter will further develop observations from previous chapters that the presence of predictive solvability factors is fundamental to solving homicide cases. To illustrate the significant differences in solvability, contrasting homicide typologies will be investigated. It is this contrast that will best highlight the three solvability factors – victim-offender relationship, cause of death, and crime scene location –

identified in Chapter Two, as most likely to increase homicide clearance rates when relating to the diverse homicide types in NSW – child and gang homicides. They will be presented for two reasons:

1. Review of extant literature and examination of NSW Police Computer Operated Policing System (COPS) data to identify evidentiary and extra-legal solvability factors specific to two types of homicides that are very different from one another which can illustrate the difficulties for police in solving them, and
2. Identify solvability factors that, although possibly known to police, are infrequently used or recorded for the types of homicides illustrated in this chapter.

Child death literature will be reviewed in this chapter, in terms of who the victims are, who the POI(s) are (when known), how the actual event occurs and therefore how the crime scene is likely to appear. Cases related to the death of children 0-17 years of age in NSW over a 15-year period (1998-2012) will be analysed via COPS data, to illustrate the relevant and infrequently recorded solvability factors related to child homicides and their investigation, so as to illustrate specific characteristics of this type of homicide.

The results of the literature review will inform the rest of the chapter by identifying new extra-legal solvability factors, implications and difficulties for investigators in investigating suspicious deaths of children. The solvability factors that were frequently recorded in the narratives of the homicide records were adverse parenting styles, biological deficit (where the POI has neurocognitive function

problems) and divorce/separation (when the POI kills under the strain of their partner threatening to or actually leaving). These new factors will be added to those previously identified by other researchers. Finally, a comparison with gang homicide will be completed to illustrate the difficulties for police investigating acquaintance/stranger homicides (which are typical of gang related killings) and the significance of a fully protected crime scene.

Gang homicides will be used to demonstrate the vast differences for investigators when gangs, drugs, and co-committed crimes are involved in a homicide event, by reviewing specific aspects of the incident[35] for the same time period. An international literature review will reveal that NSW Police are not in a novel position regarding issues with gangs and their complex crimes which are often co-committed. It will show that specific solvability factors related to child homicide are different from those of gang-related events and how when compared to each other, child deaths are easier to solve using the period of time from death, to the day the case is cleared as the measure.

This chapter introduces a new methodology that outlines the process undertaken to access COPS data 1997-2012, and complete a basic quantitative review of the data received. It will give support for the choice of the data source in this instance. The results are presented within the text and illustrated by the use of four amalgamated case studies[36]. This is followed by analysis, based on findings and themes identified from the review of literature. Specific solvability factors are

[35] Victims, weapons, crime scene, victim/offender relationship.
[36] The four case studies presented here to illustrate key findings were amalgamated from original ten due to the inability to de-identify because of low numbers and distinct case features.

introduced, drawn from the specific homicide typology, which are gang affiliation, police workload (Wellford & Cronin, 2000) and anomie (Merton, 1964).

The Situation in Australia

The violent and untimely death of a child, defined by the Children and Young Persons (Care and Protection) Act 1998 as a person aged 0-15 years[37], is abhorrent and has become the focus of public health research across many countries and social levels past and present (Friedman, Hrouda, Holden, Noffsinger, & Resnick, 2005; Friedman, McCue-Horwitz, & Resnick, 2005; Kauppi, Kumpulainen, Vanamo, Merikanto, & Karkola, 2008; Riley, 2005; Rougé-Maillart, Jousset, Gaudin, Bouju, & Penneau, 2005; Schwartz & Isser, 2000). When children are the focus of this violence, it can be either repeated violent physical attacks over prolonged periods of time, or an isolated spontaneous loss of self-control, or persistent and acute neglect, or abandonment (Department of Premier and Cabinet, 2009).

Elevated levels of preventable injuries among children compared with other age groups are of concern in Australia (Australian Bureau of Statistics, 2006), with child injuries worldwide seen as a growing problem (Borse et al., 2008). Others believe that the killing of children is an intra-familial phenomenon in which parents are the perpetrators in more than half of child murders (Riley, 2005; Stroud, 2008). In fact, Finkelhor and Dziuba-Leatherman (1994) contend that children, more than adults, are likely to become victims of violent crimes. In Australia, the National Homicide Monitoring Program (NHMP) reports that the majority of child homicides (85%) are committed by their parents (Chan & Payne, 2013), technically making case clearance easier.

[37] Note: the NSW Police define a child as anyone between the ages 0-17 years.

There are inherent difficulties of identifying a specific family *type* or circumstances that consistently show factors where risk is likely to escalate to fatal abuse (NSW Ombudsman, 2011, p. 23). Familial homicides are usually a result of long-term difficult and complex situations which make discovering motive particularly difficult (Strang, 1996). Over decades, researchers have attempted to better understand the motivations and the specific incidents, and to that end created motive classifications including:

- altruistic, protecting the victim and family from real or imagined suffering (Kirkwood & Eltringham, 2012);
- neonaticide (killing of newborn infant);
- fatal abuse, the result of acts of physical or sexual violence and/or neglect; mental illness,
- resulting actions of a POI suffering with a mental illness (Nielssen, Large, Westmore, & Lackersteen, 2009); and
- retaliatory, deliberate and (often) premeditated abuse resulting from anger, frustration and disappointment, frequently aimed at the intimate partner first (Nielssen et al., 2009).

These motive categories have been found to be closely associated with the POI's gender (Domestic Violence Resource Centre, 2012). As an example, mental illness has been identified as a significant factor on the part of mothers who kill their children, whereas abusive and violent retaliatory deaths are more commonly associated with men (Morris 2009).

Police, Solvability and Clearance Rates

The role of police in relation to criminal behaviour is clear; it is to investigate, apprehend, and then charge the Person of Interest (POI), and this response needs to be consistent (Hammond & Lanning, 2001). However, in relation to child abuse, police are often called upon to be proactive, and therefore prevent abuse and murder. The issue here, in relation to police, is that when children are involved as victims, the investigations are difficult, convoluted and sometimes unsuccessful. This is primarily due to three issues: firstly, the vulnerability of children as victims; secondly, the media frenzy that occurs when a child is killed; and finally, the pressure brought to bear on police from politicians, media, and the public when a child dies violently.

Given the problems in accurately determining the causes of child deaths, it is necessary that each incident be investigated rigorously and systematically (Brookman & Nolan, 2006; Sidebotham, 2005). Investigation of child homicide also presents many difficulties. For example, in cases when the POI is a parent or caregiver, homicides may be masked to appear unintentional, usually there are no witnesses, forensic and pathological evidence is unclear, and investigative pathways are severely limited (Boudreaux, Lord, & Jarvis, 2001). For any homicide investigation, there are clear processes to determine cause of death including: examination of the crime scene as soon as possible after the incident to avoid loss or contamination of evidence; separate interviews of caretakers to reduce the risk of false evidence; and information gathered from the wide range of people in the child's world including siblings, relatives, neighbours, friends, and professionals (U.S. Department of Justice, 2002).

From a police perspective, some child homicides can be difficult to solve as they can appear similar to deaths from unintentional injury, such as a fall or other causes, like Sudden Infant Death Syndrome (SIDS) (Creighton, 1995; Finkelhor & Ormrod, 2001; Hunnicutt & La Free, 2008). These policing processes are especially important in childhood death situations, however, as they may be challenging because of an increased requirement for a combination of careful consideration, professional judgement and sensitivity (Marshall, 2012).

Investigations generally involve numerous agencies, investigators, technicians, forensic experts, and prosecutors, all with different degrees of training and experience, with the information and level of communication between individuals and agencies often quite varied. "No one agency has the sole responsibility for dealing with abused children" (U.S. Department of Justice, 2001, p. 18). Research shows that generally, the most successful methods for solving cases involving the death of a child feature coordinated interagency planning and effective communication between professionals, such as social workers, physicians, psychologists and police.

Ringland and Rodwell (2009, p. 5) disclosed that a very low percentage (approximately 10%) of victims of domestic violence who eventually became homicide victims were known to police within 12 months leading up to their deaths. This raises the question that if police were not aware of either the victims or POIs in these previous cases, was any other relevant agency or department aware of the possible threat? The key in this situation is to eliminate *linkage blindness*, a term

coined by Egger (1993) which basically states that law enforcement and other related agencies can be *blind* due to jurisdictional boundaries, policies and procedures preventing the sharing of vital information.

The NSW Ombudsman (2009) agrees, stating "it will be critical that timely and sufficiently detailed information is shared between the Child Wellbeing Units, between the Child Wellbeing Units and Department of Children Service (DoCS), and between the proposed Family Referral Services, the Wellbeing Units and DoCS[38]" (p. 14). These specialised units are asked to, amongst other things, identify and record victims' risk factors, criminal antecedence and other relevant information that may flag the child as "at risk". Police can identify *at risk* children by looking to the extra-legal and evidentiary solvability factors that, when added together, give a clear indication of possible victimisation.

Other issues for police include when the death is not reported as suspicious. In Australia, child homicides are under-reported (Chan & Payne, 2013; Lamont, 2010). Figures gleaned from the NHMP housed within the Australian Institute of Criminology (AIC; e.g., Irenyi & Horsfall, 2009; Lamont, 2010) indicate that, on average, 25 children are killed by their parents each year (Mouzos & Rushforth, 2003; Chan & Payne, 2013). These recorded deaths do not include all child homicides, as an unknown number remains undetected due to: an inability to determine the cause of death (Lamont 2010); the remains not being found (Strang, 1996); some deaths being termed *unintentional*, when they might in fact be due to child abuse or neglect

[38] DoCS is now known as Department of Family and Children Services

(Lamont, 2010); the death being misclassified (i.e., SIDS instead of suffocation); difficulties in identifying potential domestic homicide victims; and non-standardised reporting and recording methods (Domestic Violence Homicide Advisory Panel, 2009). Therefore, the incidence of deaths of children attributable to abuse and neglect is unclear, and in general, is seen as considerably underestimated (Brookman & Nolan, 2006; Creighton, 1995; Finkelhor & Ormrod, 2001; Hochstadt, 2006; Porter & Gavin, 2010).

The lack of comprehensive information collected in all jurisdictions in Australia further limits accuracy regarding the number of victims of child homicide (Lamont, 2010; Lawrence, 2004). Scott, Tonmyr, Fraser, Walker, and McKenzie (2009) note that official statistics on the incidence of child abuse depend on a range of sources, such as child protection records and morbidity and mortality data. They comment, however, that not all abuse is reported to child protection services, nor is it always identified or documented adequately. These incidents of abuse are considered within the auspices of the 'dark figure of crime'.

The *dark figure of crime*[39] represents the degree to which some criminal acts are not revealed or discovered, and consequently, do not appear in official records (Indermaur, 1996; MacDonald, 2002; White, 2008) and easily applies to child homicide (Alder & Polk, 2001; Brookman & Nolan, 2006; Wilczynski, 1997) for all of the reasons mentioned above. The reasons for the direct relationship of child abuse and homicide is that the *dark figure* may also include the legal difficulties concerning

[39] The *dark figure of crime* is defined as the amount of unreported crime which alters the reliability of official crime statistics. (Biderman & Reiss, 1967).

proof of homicide, and professional reluctance to act without conclusive proof (related to medical examiners and cause of death). Even when there is suspicion, professionals may be reluctant to raise their concerns without evidence of an act of omission (Brookman & Nolan, 2006; Wilczynski, 1997).

Further, professionals may not wish to put at risk their relationship with the victim's family, or may be worried about the repercussions for their careers (Brookman & Nolan, 2006). Also, although autopsies are excellent at establishing whether a child died from natural causes, or if the death was caused by injuries or trauma, there are cases where actions on the part of an adult(s) that may have led to the child's death cannot be established (Alder & Polk, 2001), particularly in the case of infants (Brookman & Nolan, 2006).

Victims

Earlier research (Finkelhor & Ormrod, 2001; Mouzos & Rushforth, 2003; Strang, 1996; Tomison, 1996) illustrated that the circumstances surrounding a child's death are varied; for example: recurring violent assaults over a prolonged period of time; an isolated event in which the offender suddenly experiences an overwhelming set of emotions (in combination with specific situational factors) and loses self-control then acts out violently; chronic neglect and mistreatment; or psychotic delusions about the victim (Hammond & Lanning, 2001). Due to their vulnerability, children are often not in a position where they can report their abuse. If the abuse, whether physical or sexual in nature, has started in the victim's infancy, they would have no reason to believe that it is not normal behaviour.

The term Sudden Unexpected Death of an Infant (SUDI) is a general definition for "all infant deaths, which are sudden and unexpected, not just those attributed to SIDS" (Byard, 2010, p. 21). This "umbrella term" (Byard, 2010, p. 24) includes all unnatural and unexpected infant deaths. A police investigation is undertaken and judgement is made, in terms of the cause and circumstances surrounding the death, so that the deaths are categorised as "those where a specific cause of death is established (explained SUDI) and those which remain unexplained (SIDS)" (Sidebotham, 2010, p. 13).

Some children may die of what is considered to be SIDS when their death may actually have been deliberately caused or at least due to neglect (Alder & Polk, 2001; Brookman & Nolan, 2006). It is not possible, however, to be sure of the incidence of covert homicide in relation to sudden infant deaths, as by definition, these are not easily discovered, due to the secrecy of the POI's actions, or the lack of diagnostic signs from the post-mortem examination (Levene & Bacon, 2004).

Some deaths may be hidden or covert in nature, where a possible cause of death due to violence may have been overlooked, or where homicide cannot, with current knowledge, be identified (Levene & Bacon, 2004). Because of their physical vulnerability and inability to protect themselves, the killing of an infant can be accomplished relatively easily (Porter & Gavin, 2010). In such cases, a common means of homicide is suffocation, where there may be no outward signs and post-mortem investigation is often unable to distinguish mechanism and intent (Brookman & Nolan, 2006; Levene & Bacon, 2004; Truman & Ayoub, 2002).

Crume, DiGuiseppi, Byers, Sirotnak, and Garrett (2002) found that when children died as the result of a violent death, the chances of it being recognised as homicide were far greater than with a much less aggressive death, and therefore physically obvious, such as suffocation. Moreover, they discovered that deaths due to such things as suffocation were more easily covered up or attributed to unintentional mistakes by the POI(s) and had inadequate levels of detection (Crume et al., 2002).

Persons of Interest

The trend for victims of child homicides to have been killed by a family member or guardian is much higher than in adults (Chan & Payne, 2013). Researchers agree that there are distinct commonalities within cultural, crime-related and socio-demographic factors across the known cohort of women who commit neonaticide. For example, these women are likely to be young, single, poor, under-educated and often unemployed (Friedman, McCue Horwitz, & Resnick, 2005; Friedman & Resnick, 2009; Mendlowicz, Rapaport, Mecler, Golshan, & Moraes, 1998; Resnick, 1970; Rougé-Maillart et al., 2005).

The following case illustrates some of the main factors related to the homicide of very young children. The first issue is the acutely disadvantaged environment into which the baby was born (Pridemore, 2008), where the district suffered with issues including teen pregnancy, teen suicide, and children living in poverty. The victim was the third child of a 20-year-old mother and her de facto partner who was a recovering addict and was 21 years of age at the time that his child died (Friedman, Horwitz, & Resnick, 2005). They lived in a regional area of NSW which had extreme

poverty, unemployment, racial problems and extensive drug and alcohol problems (Bennett et al., 2006).

Case Study One

A sixteen-week-old female victim was pronounced dead, mid-2004, in a regional hospital. At the time of her death, the victim's custody was shared between her natural mother, and father and his de facto partner. Ensuing investigations and a post-mortem examination showed that the victim died as a result of blunt force trauma to her head and had suffered multiple skull fractures and a number of other externally visible injuries. Issues that were important to the investigation included: complex medical issues surrounding a number of serious pre-existing skull fractures; the timings of when all injuries were inflicted, and whose care she was in when her fatal injuries were inflicted. Further issues were that she died in an extremely socially-disadvantaged part of country NSW, with many of the residents having extensive prior adverse contact with police. Witnesses were reluctant to assist the investigation, or when they did, provided only limited, untruthful, or incomplete versions of events about matters of direct relevance. In mid-2006, the victim's fathers de facto was arrested and charged with the murder of the victim and later with two counts of perverting the course of justice. She made comprehensive admissions in relation to deliberately causing the injuries to the victim by slamming her head against a piece of wooden furniture to stop the victim crying, then choosing to delay seeking or rendering any medical assistance. In 2007, in agreement with the DPP, the POI pleaded guilty to the manslaughter of the victim and to one count of perverting the course of justice. The offender received a custodial sentence of seven and a half years.

The child's cause of death was sustained blunt force trauma to her head and a physical beating on her body. The child was born with complex health issues, due to her parent's drug addiction, and witnesses testified that the victim cried a lot. The majority of homicides of infants and young children in NSW are committed in a residence, by parents, guardians or caregivers, using 'weapons of opportunity'. It can be said that the use of a 'weapon of opportunity' may be indicative of maladaptive stress responses. At just 16 weeks of age, the victim already had a number of significant pre-existing skull fractures (NSW Police Dataset, 2013). Unfortunately,

women that are likely to be violent towards children tend to avoid authorities, the health care system and other welfare services that ask them to account for their child's wellbeing (Craig, 2004). Important risk factors, such as substance abuse and mental illness, should be recorded with medical and social services in order to review the child, and subsequently the mother. Child homicide is the extreme end of the abuse spectrum; however children, especially infants, die with relative ease. The adults in this case had extensive and adverse contact with police. Witnesses were reluctant or untruthful and in general, the immediate neighbourhood residents were apathetic (NSW Police Dataset, 2013). This does not appear unusual as other neighbourhoods sharing the same socio-demographic factors appear to be non-compliant to a police presence in their community (Tyler & Fagan, 2008).

US data identified mental illness as a significant factor in the violent deaths of children. Mental health issues were found to be the next highest causal factor after emotional outburst, primarily in relation to mothers (Tomison, 1996). d'Orban's research (1979) demonstrated that the bulk of mothers who had killed their child, whilst actively experiencing symptoms of mental illness, had tried to kill *all* of their children. Noteworthy is that information gleaned from the NSW Police dataset could not confirm that this is the current case in NSW, as there is not a field in the reporting process specific to this information. However, this researcher was able to consult the narratives of some of the events, and establish an anecdotal link between child deaths and mental illness in their parents. Further research needs to be conducted regarding this subject.

Crime Scene

Until December 1, 2005, the ability of police to establish a crime scene had never been formalised in any act of law. The introduction of the *Law Enforcement (Powers and Responsibilities) Act, 2002* (LEPRA) granted police the legislated authority to establish a crime scene and undertake certain activities. Simply put, a crime scene is a place where the investigator reasonably suspects a crime may have been committed. It can be in a public or private premise and involve any type of crime (NSW Police Force, 2010).

The accepted rationale that more child homicides occur in a private household than in public places is because the majority of this type of homicide are listed as being domestic in nature, and therefore, more often occur inside a residence. Due to the age of child victims, they more often than not know their abusers and share similar family background, and environment. When a parent is recorded as the POI, the findings concerning homicide clearance show a greater likelihood of clearance when the crime has occurred in a private residence (Addington, 2006; Litwin & Xu, 2007; Mouzos & Muller, 2001; Wellford & Cronin, 1999).

Within a private residence, investigators are both helped and hindered. The positive aspect is that it is a relatively private and secured location with limited access to the general public, and therefore, forensic evidence found at the location is likely to be linked to the people who live in, or have access to, the domicile, including the POI. The negative aspect is that one of the basic tenets held at law is that *a man's home is his castle*. This maxim has been cited through the ages to demonstrate how the law recognises the right of a person to exclude others from their home. In further

recognition of this fundamental notion, section 88 of LEPRA states that, "before a police officer may establish a crime scene on private premises, they must firstly be on those premises lawfully" (LEPRA, 2003). Further, hindrance to investigations comes from the fact that the POI(s) has time to clean up, destroy evidence and generally interfere with the deceased and the crime scene, which makes the work of Crime Scene Investigators and other professionals more difficult. Additionally, as a resident or frequent visitor to the property, the POI can provide an innocent explanation as to why their DNA and other forensic evidence were present at the scene.

Method

This part of the research utilises a quantitative analytic study to examine one of the research questions relating to whether extra-legal or evidentiary factors, relating to different types of crime scenes, have any influence on the time it takes to solve and close the homicide. More specifically, the unit of analysis for this study is child and gang-related homicide cases and the data related to these, for the years 1998 to 2013.

All child and gang related homicides reported to or detected by NSW State Crime Command Homicide Squad within this time period are included. The data therefore consists of all homicides occurring within the 15-year period, and reflects an accurate picture of NSW homicides of these types to identify the extra-legal or evidentiary factors specific to each homicide typology. However, the findings are not representative of *all* types of NSW homicides, as not every homicide occurring in this time period is included due to the selection criteria used, as detailed below.

Results from the previous chapter and the international literature review in this chapter illustrate that the following variables are likely to increase clearance rates: victim gender, victim age, weapon (method of homicide), body location and victim-offender relationship. The quantitative data in this section were reviewed to identify the following:

- Time taken for child and gang-related homicides to be solved from the date of reporting
- The location of the crime scene – public or private – and the affect that this had on solving the homicide
- The type of weapon commonly associated with each of the different homicide typologies
- The type of victim-offender relationships, if any, commonly associated with each of the different homicide typologies.

As several cases were still subject to criminal proceedings at the time of writing this thesis, the case studies presented within this chapter are an amalgamation of ten cases, as precaution against exposing the individuals involved in the cases.

Caveat - Information Source and Data Capture

The data used in this thesis were downloaded from the NSW Police Computer Operated Policing System (COPS) data for the period 01/07/1998 to 31/05/2013. This dataset includes all offences of murder and manslaughter where the victim was 17 years of age or younger at the time of death. Enterprise Data Warehouse (EDW) is the corporate database used by NSW Police for the extraction of statistical information; EDW extracts data directly from COPS. The data extracted utilising

EDW require manual input of data and, as such, will have disparities with other maintained databases (e.g., spreadsheets) depending on factors including, but not confined to: when COPS is updated; where it is updated; by which station or Local Area Command (LAC) it is updated; and whether it is updated at all. It should be noted these data are subject to slight variation, depending on the date the data are extracted and correct input and classification at the time of event or incident creation[40]. A report from COPS was generated to create a sample of cases for this research.

Threshold for Inclusion

The criteria established for data collection, in relation to this chapter, to ensure consistency and comparability in the data included that:

- The case had to involve the homicide of a child 17 years of age or younger
- The event had to have occurred within the state jurisdictional boundaries of NSW
- NSW State Crime Commission (SCC) Homicide Squad detectives were involved in the investigation
- Each case had to have been assigned to SCC Homicide Squad between July 1, 1998 and December 31, 2013[41].

Data

The sample size was restricted only by the threshold of inclusion and the total number of homicides in the state over the period in question. The researcher, was extremely privileged to be granted the level of access to original data and case files of

[40] NSW Police uses a statistical corridor based on 2.5 standard deviations on either side of the average line to identify significant changes in the level of activity on a Control Chart. With a 2.5 standard deviation, the probability of a point falling outside the control lines purely by chance would only be 2%.
[41] These dates were selected to facilitate comparison with NHMP data, which are collated on a financial year basis.

NSW Police. There were issues in relation to missing data in a number of files and additional research was required to fill in the gaps to allow a systematic analysis. The data included all reported child murder/manslaughter cases committed in NSW between 1998 and 2013, totalling 235. Throughout this thesis research, confidentiality and anonymity of the data were the most important aspects of dealing with the data (Ellis, Hartley, & Walsh, 2010).

After collecting the data via EDW from COPS, information was uploaded into *Microsoft Excel* and sorted into columns specific to the variables collected by police, such as: victim gender, victim age, weapon (method of homicide), body location, and victim-offender relationship. The data were then separated across different spreadsheets related specifically to child homicides and gang-related homicides.

Limitation

In relation to child homicides, the data numbers were relatively small, which can be considered a limitation when considering statistical data analysis. It should be noted that the phenomenon studied is infrequent and that this population is generally difficult to access. Given this limitation, research in the area of child homicide is greatly restricted by statistics which are inadequately validated, thus limiting the understanding of the nature, extent and significance of the problem (McKenzie, Scott, Waller, & Campbell, 2011). Despite the aforementioned limitations, the findings of this study provide empirical evidence-identified solvability factors available to police to assist in solving and clearing these homicides.

Results

Australian figures between 1998 and 2010 revealed that on average, 27 children were victims of homicide per annum (Chan & Payne, 2013), with 16 children being victims of fatal violent acts in the NSW jurisdiction per annum (NSW Police dataset, 2013; See Figure 16). Almost two thirds of these children were aged five or less and approximately half of all children died as a result of *assaultive force*[42] and were under one year of age. For the period 1998-2013, there were 235 child homicides, with 72% *(n* = 169) having a child protection history (COPS data, 2013). Of interest is the fact that the risk factors included in cases of a child's violent death are usually comparable to those present in thousands of other cases of child protection where there is a non-fatal outcome (Wood, 2008).

Figure 19 illustrates that since 2003, there has been a general decline in child homicide. Feasible reasons for this decrease include: alterations in demography, fertility levels altering in juveniles, legalising abortion (Children by Choice, 2013), economic prosperity, increasing lengths of sentence for convicted offenders, a rise and spread of welfare agencies promoting social intervention, changing social norms and practices, and finally, increased mental health services and psychiatric pharmacology.

[42] Defined as assault using hands and/or feet

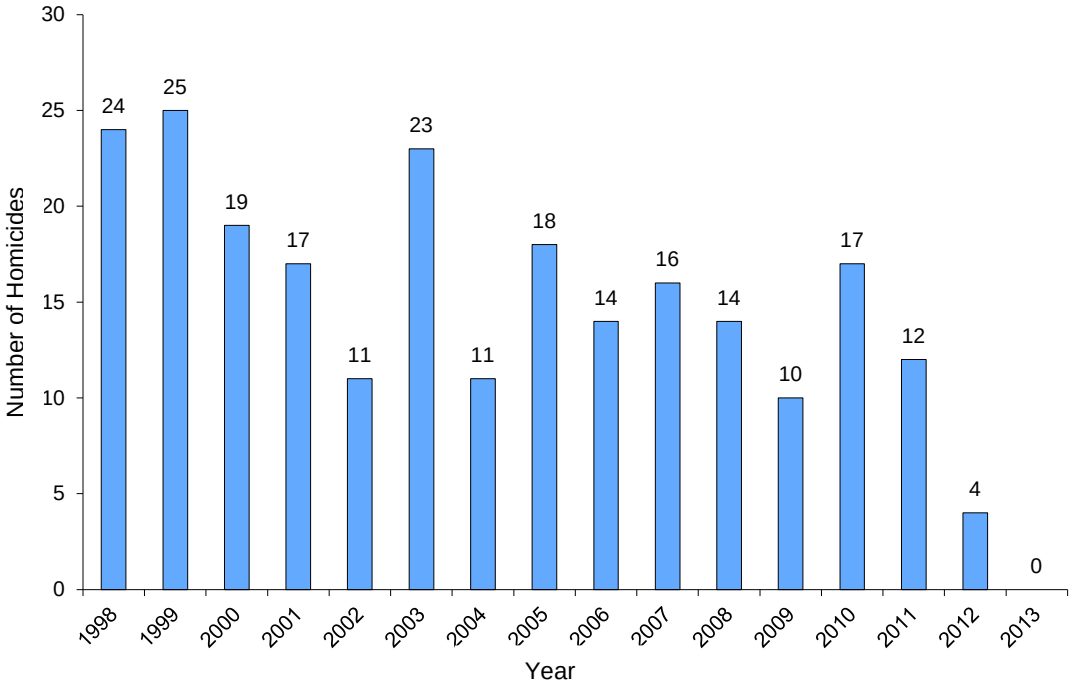

Figure 19. Number of child homicides in New South Wales (1998-2013)[43]

Of the children listed as victims of homicide in NSW for the period, 44.5% were subjected to long-term physical abuse and of this number, more than half were infants and toddlers[44] between the ages of 0 to 3 years (Mosby, 2009; Figure 17), and vulnerable (NSW Police dataset, 2013). This vulnerability stemmed from the fact that they were incapable of communicating the level of abuse they were suffering, which when sustained long-term (relative to their years of life), led to their death.

[43] At the time of data collection, 1 May 2013, no new child homicides had been reported to NSW Police.
[44] Where toddlers are defined as children between 12 and 36 months of age.

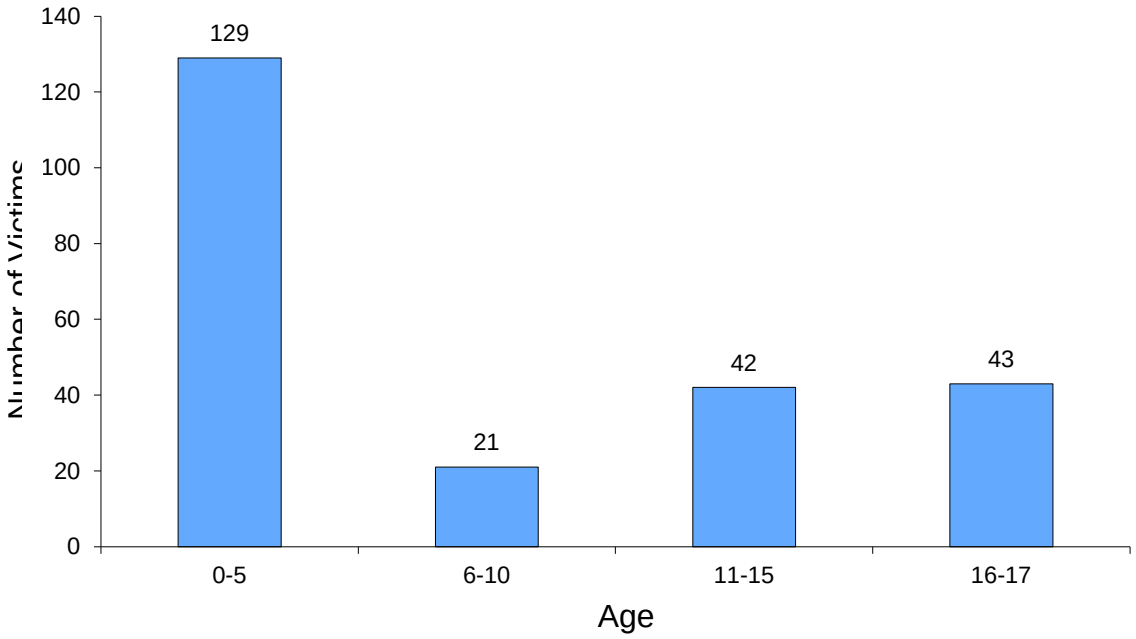

Figure 20. Age in years of child victims of homicide in NSW 1998-2013

Person(s) of Interest

Existing literature reports that most child homicides are committed by family members, usually a parent or step-parent. The majority of child homicides in NSW *(n* = 144, 61%) occurred within a familial context; in other words, those children killed by a family member resided with that family member. Of that familial context total, nearly all *(n* = 143) were killed by one or both parents (including de facto/step-parents; See Figure 21), and were found to have died as a culmination of medium to long-term abuse, neglect, mistreatment and physical beatings (NSW COPS data, 2013). The NSW Police dataset (2013) is in keeping with the national trends in that more than half of children were killed by either/both of their parents (Chan & Payne, 2011). In many of these cases[45], the POI experienced overwhelming emotions that they could not control, combined with situational factors such as poverty, drug or

[45] Discovered by reading the case 'narratives' attached to the COPS events.

alcohol abuse, and little to no support mechanisms, which resulted in them harming their children (see Case Study Two).

There were 15 children who died from injuries intentionally caused by their biological parents in collusion with one another[46]. This finding is consistent with both national and state trends in child homicide. In addition, 169 POIs had one or more of the characteristics frequently associated with child abuse and neglect recorded in the Briefs of Evidence or COPS *narratives*[47], including alcohol abuse *(n* = 91), drug abuse *(n* = 49), mental illness or mental health concerns *(n* = 23)[48], other violence *(n* = 36), or previous history of perpetrating domestic *(n* = 167). In 22 of the recorded incidents, the family had experienced a recent breakdown as illustrated by Case Study Two. More than one risk factor was evident for a number of POIs.

Case Study Two

Early in 2007, after a long and difficult period within his marriage, a long personal battle with depression, alcohol and aggression, and a threat from his wife that she was taking his children and leaving him, the Person of Interest (POI) attempted (unsuccessfully) to commit suicide by ingesting poison. The POI was a holder of Class A & B firearms licences and as a consequence of the attempted suicide, the POI's firearms were confiscated by law enforcement. He successfully appealed against the seizure of his weapons and a year later, had his firearms returned and his firearms licences reissued. A few months later, the POI, his spouse and two young children (aged less than 4 years) were discovered deceased in the master bedroom of their residence. It was revealed that the POI had stabbed his spouse in the chest, severing an artery; he then asphyxiated her, resulting in her death. He then went into each of his

[46] This thesis does not include children killing other children – all offenders considered in the dataset are over 18 years of age. Peer-related homicide generally relates to young people in a context of confrontational violence between friends, acquaintances and strangers, peers are usually of similar ages and social status.
[47] The narrative field appears in a COPS record and allows officers to tell the case story.
[48] This number was gained by reading the narratives related to the specific COPS records – there was not a field for police to complete related to mental illness, as this is a subjective review of the POI by an officer (who is not an expert in the field of mental illness).

> children's bedrooms where he asphyxiated each of them with a pillow. He placed his deceased children on either side of his spouse on the main bed, after which he collected a rifle from his vehicle, laid down beside his family and shot himself once in the head.

This case study supports argument posited by Adams (2010) which stated that most men (92%) committing a murder-suicide will do so with a firearm during an episode of jealous rage (68%). They are unable to cope with sudden and significant changes to their immediate environment, such as their intimate partner leaving (or threatening to), or when they experience a critical change in their economic status, such as the loss of employment or not receiving an expected financial windfall.

More than one third of the child victims died as a result of family arguments and some of these events included the death of all family members, for example a murder-suicide (as in Case Study Two). From the police perspective, a murder-suicide is considered a *self-solver* (Innes, 2003). During the period of research, the total number of offenders who committed suicide following a homicide incident was 18; of these, four had killed a child during the event. Significantly, in all four cases, the POI was a custodial parent of their victim (NSW Police dataset, 2013). The information related to knowledge of family arguments occurring prior to the homicide event only comes to light when police complete their investigations if there is not a previous registered history with police, Department of Child Services (DoCS) or medical staff.

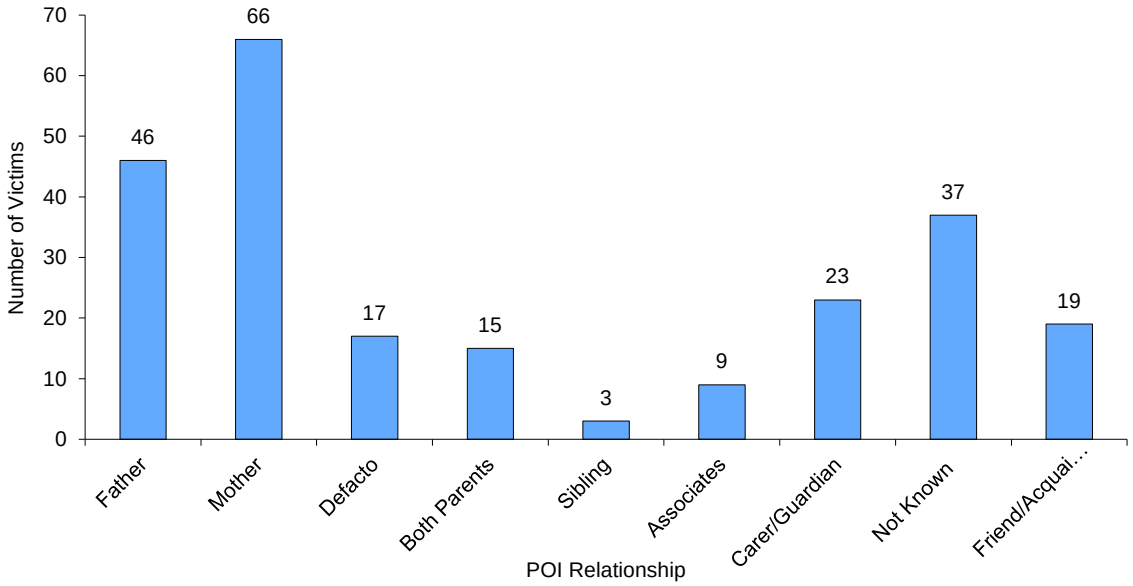

Figure 21. Chart depicting POI relationship to NSW child homicide victim (1998-2013)[49]

In the majority of cases, there had been alcohol or drugs (*n* = 141, 60%) used by the POIs. In one case, the alleged offender had a history of drug and alcohol abuse, family violence and mental health problems (see Case Study Three). Thirteen POIs had a history of domestic violence, mental health concerns and criminal activity over the five years prior to the homicide event.

Case Study Three

Early in 2002, the victim, a two-year-old male, was admitted to a large regional hospital suffering severe injuries. He had previously presented to other hospitals in the district. Medical bone scans revealed a number of fractures and breaks to both his arms and legs; some were older and showed signs of healing (no medical attention was received for these injuries). The victim was placed on life support but was later pronounced dead due to a brain haemorrhage. This child's younger female sibling was removed by DoCS and Joint Investigative Response Team (JIRT) and local police started an investigation. The victim's mother stated that the head injuries must have

[49] "Not Known" section of Figure 21 can be a blend of unsolved case and occasions when police do not fill in the appropriate field in the COPS database.

> occurred when the child jumped onto his bed and fell, hitting his head against the wall and window sill. The de facto of the victim's mother denied any knowledge of how the injuries, new or old, were sustained. The male de facto, who had a history of drug and alcohol abuse and was being treated for (possible) adult onset schizophrenia, was charged with murder.

In more than 59% of the cases *(n* = 139), a male was identified as the POI. In 32 of these cases, a female was identified as the co-accused, whether by active involvement in the child's death or failing to render assistance during or post the abuse. The data demonstrate that the majority of deaths were brought about by the victim's caregivers, whether their natural mother, step-mother or de facto female guardian or significant male guardian (natural father or de facto). Over half of the children (*n* = 131, 56%) died as a result of episodes of domestic violence (NSW Police Dataset, 2013).

Crime Scene – Homicide Event

Results showed that the majority of children (*n* = 204, 87%) who were murdered in NSW died in a private residence, as opposed to a public space. In fact, 74 percent (*n* = 151) of these children were murdered in their own home, as opposed to the offender's home (*n* = 45, 19%) or some other person's home (*n* = 16, 7%)[50]. Results identified that the type of homicide most often determines the location of the event. As previously reported, domestic and intimate homicides are the largest category of homicides, not only in NSW, but Australia-wide.

[50] These findings should be interpreted with some caution because homicide incidents that occur in a dwelling shared by both the victim and the offender will be recorded as the victim's home. Only if the offender and victim live separately and the homicide occurred in the offender's residence will the homicide location be recorded as the offender's home (Chan & Payne, 2013 p.11).

New Solvability Factors

This thesis examined 235 child homicides, occurring from 1998 to 2013, and identified infrequently recorded extra-legal solvability factors (See Table 20). The literature review had alluded to the fact that the presence of numerous solvability factors and forensic evidence connecting the POI to the crime scene, the domestic nature of the crime and previous police or Department of Community Services (DoCS) interventions would aid police to solve the cases more quickly in terms of days, and more easily in terms use and allocation of resources. This research indicated that while police relied heavily on forensic evidence to increase solvability, especially in unsolved cases, the overall effect of forensic evidence on case clearance was not as important as combinations of other solvability factors analysed, such as witness participation, a known POI, and continuous appropriate financial and human resourcing on each investigation.

The following lists evidentiary and extra-legal solvability factors specifically related to child homicides. Those that are highlighted are the new factors which were identified during this research as possible new extra-legal variables that may assist police in the future to either solve previously unsolved child homicides or to expedidite the investigation process during a current case in terms of days to case closure.

Table 20

Evidentiary and Extra-Legal Solvability Factors related to Child Homicide

Evidentiary	Extra-legal
Crime scene location	Age
Victim-offender relationship	Criminal antecedence
Weapon	Differential poverty
	Disability (of victim)
	Drug affected victim
	Drug or alcohol affected POI
	Duration of cohabitation
	Education level of parent
	Family instability – uncertain relationships
	Gender
	Hyperactivity
	Illness (of victim)
	Ethnicity
	Low achievement
	Marital status
	Maternal age
	Parenting skills
	One or both parents re-partner or re-marry
	Size of family
	Socio-economic status

These 'highlighted' solvability factors – criminal antecedence, differential poverty, disability (of victim), drug-affected victim (such as a child born addicted to

narcotics), duration of cohabitation, education level of parent, family instability-uncertain relationships, hyperactivity, illness (of victim), low achievement, maternal age, parenting skills, one or both parents re-partner or re-marry, size of family – were obtained from three sources. The first was the COPS raw data and narratives, the second, NHMP dataset (reviewed via their Annual Reports) and thirdly, through existing literature.

Some of these variables have previously been identified and, sometimes, even recorded in NSW Police case files; however, the value these extra-legal solvability factors can bring to a case has not previously been reported. The recognition of some or all of these factors would identify or *flag* a child as being at risk. Police could thus identify at risk children by reviewing these variables, and when the crime is homicide and the case is unsolved, these new, extra-legal solvability factors could assist in solving the case. Future research could explore the extent of the significance of these factors in predicting positive case solvability.

Prosecution

Sixty eight percent of the 235 cases (n = 159) were solved at the time of producing this thesis (Figure 22). Of the solved cases (n = 159), it was the combination of the private crime scene and the victim-offender relationship and the history of domestic or family violence that assisted police in solving the cases. Pence and Wilson (1996) support the results of this research in that the majority of police think that all child homicide offenders deserve to be incarcerated; however, it is the courts and juries, not the police, which ultimately determine case solvability.

Successful prosecution is considered fundamental to deterring future crime (Hare, 2006; Kennedy, 2009), so it is essential that NSW Police Homicide Squad provide a quality brief of evidence as it is tantamount to a successful prosecution and subsequently positive case clearance. Considering the difficulties mentioned earlier with regards to investigating and prosecuting these cases, the rate of conviction shown in Figure 22 looks positive for NSW Police. At the time this thesis was written, 26% (*n* = 62) of the cases were unsolved.

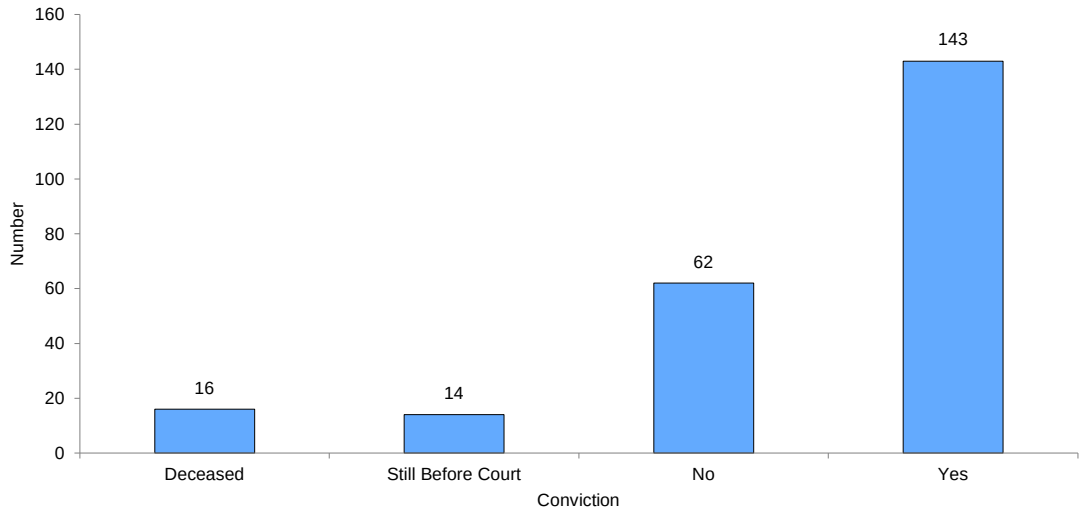

Figure 22. Convictions for homicide of a child NSW 1998-2013.

Victim – Cause of Death

Nationally, a large number of people murdered in 2008-2010 in Australia died as the result of a stab wound (44%); however, the most common cause of death for

children was a severe beating (30%) (Chan & Payne, 2013). This would suggest that the possible reason for the mode of death (being beaten as opposed to stabbed) is a direct result of parental frustration, anger or the sadistic nature of the offender[51] (See Case Study Four). Interestingly, older children (>10 years of age) more often died as the result of knife wounds or firearms (Chan & Payne, 2013).

Case Study Four

Early in the morning of late 2007, an infant male was treated by ambulance officers at his home after he had allegedly awoken from sleep vomiting and had gone into cardiac arrest. Upon examination, it was found that the victim had a laceration to the upper lip, bruising around the right eye and bleeding to the brain. The child remained on life support in the Intensive Care Unit for two days, whereupon medical treatment was withdrawn and he was pronounced dead. Subsequent examinations showed that the child had died from complications as a result of a subdural haemorrhage (a bleed into the brain). Police investigation identified a number of incidents involving the victim, where it was alleged that he had previously been the victim of assault and unexplained injuries. A crime scene was declared at the victim's residence and a Crime Scene Warrant executed, which resulted in a mini-siege involving the POI. As a result of the siege, the POI was arrested and later charged with Assault Police and Use Weapon to Avoid Apprehension. At the time of this offence, the POI was on parole for murder, and the fresh charges resulted in a parole revocation and bail refusal.

The POI was interviewed, during the course of which he admitted involvement in other crimes but denied any knowledge of the injuries observed upon the victim. In the interview, he suggested that he was affected by drugs and that he had left the victim in the care of his mother. The victim's mother during interview could not provide a reasonable explanation as to the victim's injuries. Police began to build a circumstantial brief of evidence against the POI and the victim's mother. As a direct result of covert evidence-gathering strategies, the victim's mother was cultivated as a witness. Early the following year, this woman provided information in the way of statements, interviews and a video walkthrough, implicating the POI as the perpetrator of the injuries occasioned to the victim. Examination of the antecedents of both the POI and the victim's mother was also undertaken, resulting in an unreported sexual assault being identified upon the victim's aunt. In early 2008, the

[51] Although, NHMP noted that motive was unclear in over 60% of child homicide cases (Chan & Payne, 2013).

POI was escorted to a local Police Station under a *section 25 order*, where he declined to be interviewed. He was charged with the murder of the infant victim and also for sexually assaulting the sister of the victim's mother.

Throughout the period of study, there were more deaths resulting from physical force (*n* = 114; 48.6%) than any other single cause (see Table 14). Research by Nielssen et al. (2009) supports the longitudinal research available from the NHMP and COPS data positing that in excess of one third of all child homicides were a result of child abuse and assaultive force. When examining the COPS data in relation to the cause of death and weapon used, firearms (and their derivatives) were used in only 7% of cases (*n* = 3), whereas 114 children were beaten, kicked or punched to death (48.6%). Stabbing wounds (*n* = 39, 16.8%) accounted for close to one in five victims and were the next most likely cause of death, followed by neglect (*n* = 14; 6.1%).

Table 14
Cause or Method of Death for Children in NSW 1998-2012

Method of death	Count	Percentage
Kick/physical force/punch	114	48.6%
Knife/sword/scissors/screwdriver	39	16.8%
Neglect	14	6.1%
Strangulation	9	3.8%
Suffocation	8	3.4%
Drug/poison	7	2.9%
Burning	2	0.8%
Drowning	3	1.3%
Firearm	3	1.3%
Poison	1	0.2%

Weapon not recorded/other	34	14.4%
Weapon not seen	1	0.7%
Total	235	100%

Although less common, other notable causes of death included nine cases where victims were strangled (3.8%), while smoke inhalation and/or burning accounted for two (0.8%) of the incidents. There were seven (2.9%) cases of deliberate administration of drugs or poison, and three victims who died of drowning, (1.3%). Where firearms were used to kill (n = 3, 1.3%), the specific type of weapon used has not been further broken down in Table 14[52]. The statistics shown in Table 14 contain a count of both victims and incidents. It should be noted that each victim in the table has been afforded a unique death cause, and that multiple victims within a single event may have different causes of death. As a result, homicide events with multiple victims may be double-counted if different causes of death were identified.

A significant finding from the research for this thesis is the time taken to solve a homicide. In relation to Australia, this research has not been previously completed and illustrates that time to positively clear a homicide significantly depends on the type of the homicide. As Table 15 illustrates, the majority of child homicides (70.5%) were solved by arrest within 91-180 days, whereas, homicides linked to gang crimes took police over one year, but under two years, to solve a similar percentage (71.6%). To directly compare time taken to solve a gang homicide in 91-180 days, there were only just over half cases solved by arrest (50.5%). The reasons for the significant differences are discussed further below.

[52] Other, less usual causes accounted for an additional 34 victims (14.4 %).

Summary

The analysis of the deaths of these 235 children between 1998 and 2013 reveals that they died in mostly violent circumstances and came from families who suffered considerable adversity, such as poverty, domestic violence and drug/alcohol abuse. Although compared to the total of all NSW homicides for the same period the numbers are small, there are some important observations that can be made both in relation to the crime scenes and to the extra-legal solvability factors discovered. The data illustrated that the overwhelming majority of victims and POIs over this 15-year period had close domestic relationships, consistent histories including police intervention, family disputes and violence that in many cases caused the primary parental relationship to break down. Secure and private crime scenes, police records of domestic abuse (both for intimate female partners and children) and relationships between the victim and POI all influenced the ability of police to solve the bulk of these cases in 3-6 months post-death notification.

Table 15

A Comparison of Time to Clear (in days) for Child and Gang-Related Homicides 1998-2012

Homicide incidents with child victims (aged 0 to 17)				Gang-related victims of homicide			
Time taken	Incidents	% in total	Cumulative	Time taken	Incidents	% in total	Cumulative
0-30 days	118	54.4%	54.4%	0-30 days	28	29.5%	29.5%
31-60 days	10	4.6%	59.0%	31-60	4	4.2%	33.7%
61-90 days	13	6.0%	65.0%	61-90 days	4	4.2%	37.9%
91-180 days	12	5.5%	70.5%	91-180 days	12	12.6%	50.5%
181-365 days	16	7.4%	77.9%	181-365 days	14	14.7%	65.3%
>1 to 2 years	17	7.8%	85.7%	>1 to 2 years	6	6.3%	71.6%
>2 to 3 years	19	8.8%	94.5%	>2 to 3 years	10	10.5%	82.1%
>3 years	7	3.2%	97.7%	>3 years	9	9.5%	91.6%
Under investigation	5	2.3%	100%	Under investigation	8	8.4%	100%
Total	217	100%	-	Total	95	100%	-

While the investigation of child homicides presents significant issues for police, other homicide typologies have their own problematic areas. This is evident in gang-related crimes, which often have factors that contrast with homicides involving child victims.

Gangs

The second half of this chapter is to demonstrate the specific factors, already reviewed in relation to child homicides – victim/offender relationships, weapon choice, and crime scene location – in relation to gang homicides. The results and discussion will show the direct impact on, and significant relationship with, the capacity of police to solve the homicide and the time required related to gang homicides. In contrast with child homicides, it is hypothesised that gang-related homicides would occur more often in a public space, use weapons more often than assaultive force and have more distant relationships, acquaintance/stranger as opposed to intimate/domestic, with the result that solving these crimes would have added complexity because of the crime location.

Gang-related homicide often occurs due to retaliatory violence, co-committed crimes and between those who do not have a significant known relationship. Therefore, it is posited that it is important for police to have up-to-date knowledge of specific gangs and their disputes, which technically could assist police in preventing retaliatory crimes. Whereas the majority of child homicides occur with assaultive force (blunt force trauma), most gang-related homicides are committed with a firearm or sharp instrument. To gain a better understanding of these homicides, a

study was conducted of the specifics of gangs, including types of gangs currently active in NSW and their activities.

Definition of a "Gang"

Frederick Thrasher (1927) published the first recognised definition of a gang, which incorporated aspects of individuals from similar neighbourhoods bonding together without any particular goals, which led over time to the development of tradition, internal structure, highly organised entities with group awareness and attachment to local territory. Contemporary research has stated that the term "gang" is too complex to warrant a simple definition; however, a number of academics support Thrasher's original definition, adding that members are typically older, usually similar in regards to their age, ethnicity, gender and location, and have a tendency to perpetrate violent crimes (Horowitz, 1990; Sheldon et al., 1992; Spergel & Curry, 1992). Gangs in Australia do not tend to align themselves with those found in the US, particularly in relation to disputes over territory, colloquially referred to as "turf wars". Australian gangs appear to have little territorial identification and lack many of the formalised gang rules and hierarchical structures found in US gangs (Peters, 1997).

Introduction

Gangs and the crimes associated with belonging to one of them have been the topic of research for decades in the United States (Katz, 2003); in contrast, there is a lack of research with an Australian focus, and those studies that have been completed are considered outdated, offering modern police forces very little guidance on current issues and developments in relation to specific types of gangs.

With the increase of gangs, members, and crimes in Australia, the need for updated research is more compelling. The most recent, non-academic studies have been completed by police forces in an attempt to have intelligence-led policing practices. Fewer studies focus on the different response required by law enforcement agencies and communities to deal with the serious violent crimes committed by gangs and how to solve these more complex crimes.

Many police officials and researchers have attributed the rise in delinquency to the increasing number of gangs, members, and gang-related crimes in areas all over the country (Bums & Deakin, 1989; Huff & McBride, 1993; Jackson & McBride, 1987; Weisel & Painter, 1997). However, notwithstanding the support that police have accepted attempting to fight against the challenges gangs bring forward, many have doubted the relevance and suitability of the establishment of specialised gang units (McCorkle & Miethe; 1998 Zatz, 1987).

In New South Wales (NSW) there are four distinct gang types:

1. Organised Crime gangs
2. Juvenile/Youth gangs
3. Gangs that only come together to commit a crime (SF BlueBonnet or R v Skaff)
4. Criminal Motorcycle Gangs (CMGs).

Using the final gang listed above as an example, NSW contains over 40% of all Criminal Motorcycle Gang (CMG) chapters within Australia – over 89 in total. Almost all of the significant CMGs in Australia are present within NSW, including three international gangs. The largest of these is the Rebels CMG, which now has an

estimated total of forty chapters within NSW and is actively expanding. All CMGs operating within NSW are highly sophisticated and structured. The Australian Crime Commission's John Lawler has been quoted as saying that "20 crime syndicates and gangs operating in Australia each generated more than $100 million every two years. Gangs continue to commit criminal activity, recruit new members and develop criminal associations that expand their influence over criminal enterprises" (Clennell, 2013, p. 1).

The NSW Police Force primarily attribute the increase in all types of gang membership to improved reporting, more aggressive recruitment efforts by gangs, the formation of new gangs, and collaboration with rival gangs and drug trafficking organisations (DTOs). Furthermore, Commanders in several Local Area Commands (LAC) ascribe the growth in gang membership within their regions to the development and ease of interaction and communication (personal communication, anonymous, February 27, 2012). In particular, the use of social media and networking, the Internet and micro-blogging websites (such as Facebook, YouTube and Twitter) and prepaid cell phones, the proliferation of generational gang membership, and a shortage of police resources to combat this type of crime, a view supported by the literature (National Gang Intelligence Center, 2011; Veno & Van den Eynde, 2007). Gangs adapt their business to reduce law enforcement involvement and interest in their activities and circumvent gang enhancement laws; the gangs adopt advanced technological tools to assist and enhance their criminal operations.

Internationally, gang and drugs crimes are on the increase and law enforcement agencies and prosecutors face increasing difficulty getting cases to and through court. Investigators become frustrated by their inability to investigate and prosecute cases successfully when primary witnesses refuse to assist the police due to fear that they will be victimised by the gang members or their associates. This refusal by witnesses to be involved in the investigation and judicial process is a major concern to the police and prosecution authorities as these actions adversely impact on the function of the justice system. A further effect is the erosion of public confidence in the ability of law enforcement agencies to protect citizens (Finn & Kerry, 1996).

Members migrate between gangs (known as '*patching over*') for promotion, financial gain or to develop new alliances for profit and influence. Collaboration between rival gangs and criminal organisations and improvements in communication, transportation, and technology have enabled gangs to expand and secure their criminal networks nationally (personal communication, Detective Inspector, Gang Squad, April 11, 2012; Katz, 2010). Furthermore, gang activities encompass the use of current technologies to their benefit, including being able to "hide" transactions in financial systems, create complex and convoluted trails in an attempt to successfully breach and subsequently affect the guardianship of complex government and financial systems (Allan, 2013).

Extant literature and COPS data have indicated that gangs regularly utilise the internet as a method of communication, to recruit new members and sanction and

support their gang activities. They also use the internet to intimidate rival gangs, police and other law enforcement agencies, and to progress their core business, including drug trafficking, extortion and prostitution. Any victims of these crimes are unlikely to seek police assistance, since they are often gang members themselves, or subject to police interest for other crimes. It is highly probable that gang members who have been incarcerated become aware of police actions, tactics and methodology, so they are able to employ advanced countermeasures whilst engaging in a range of criminal activities. As an example, they become forensically aware and are able to identify when covert surveillance is used against them.

NSW Police State Crime Command Gang Squads

NSW Police anti-gang units and gang-focused task forces play an important role in the disruption of gang activity in NSW. Collaboration among Federal, State, and Local law enforcement agencies has resulted in a number of successful gang suppression activities. Despite this, there is an increase in gang-related crime and violence, which could be attributed in part to conflict between gangs, territorial disputes and the release of imprisoned members back into the community. Gangs have a substantial involvement in the narcotics trade and often control the movement and supply in their territories. This poses a significant risk to public safety and stability in most major and mid-sized cities as unlawful, gang-related drug distribution activities are often associated with violence and at times, homicides. This gang violence, which is often connected with disputes over control of territory and enforcement of drug debts, is seen to occur in both urban and more frequently suburban areas, as gangs increase their control of drug distribution into new areas

(Degenhardt, Reuter, Collins, & Hall, 2005). This would directly impact on crime clearance rates, as they are often co-committed crimes, which are known to be more difficult to solve, especially when homicide is involved (Mouzos & Muller, 2001).

There are several gang squads that operate from the NSW Police State Crime Command, such as:

- Asian Crime Squad
- Middle Eastern Organised Crime Squad
- Organised Crime (Targeting) Squad.

The Squads conduct multi-level investigations and develop intelligence products on these criminal groups, which have a propensity for violence. They implement strategic actions through the provision of anti-gang intelligence, investigative advice and the provision of specialised investigative services to support other police teams and law enforcement agencies (National Alliance of Gang Investigators Association [NAGIA], 2010). The Gangs Squads lead and drive the NSW Police Force response in respect to serious and organised gang-related activity, primarily involving Criminal Motorcycle Gangs (CMG) and other selected organised criminal networks.

Examples of some of the groups monitored and investigated by the Gang Squads, and the impact their activity has on clearance rates, include:

- CMGs, of which NSW has the largest number of chapters and members in Australia. CMG members consider themselves to be the one percent of motorcycle riders that do not abide by society's laws and morals, giving rise to the *1%* patch worn by members in addition to their club insignia (Veno, 2002). As a result, it has become the convention within Australian and International law

enforcement communities to define CMGs as those motorcycle gangs that identify themselves as *1%* gangs

- Former Soviet Union Organised Crime (FSUOC) commonly referred to as Russian Organised Crime. Following the break-up of the former Soviet Union, international intelligence indicated the movement of FSUOC criminals, predominantly Russian, into western societies. The influx into NSW was well documented at the national level by the Australian Federal Police (Australasian Police Ministers Council, 2001)
- Eastern European Organised Crime (EEOC) includes individuals originating from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, Serbia and Montenegro, Slovakia and Slovenia. Their activity predominantly involves the manufacture and distribution of amphetamine-type substances, with a trend towards the cultivation of cannabis. Networks including entities of Eastern European background continue to operate in a number of flexible and fluid groups coordinated by a centralised rather than a formal hierarchical structure. These groups are generally bound by ethnicity, but are willing to work with other groups of differing backgrounds and are extremely flexible in terms of adapting to changing criminal markets, competition and law enforcement attention and methodology
- Established Criminal Networks (ECNs) are groups of highly developed organised crime syndicates and criminal networks. ECNs are not ethnic, cultural or ethos

specific, but are based on long-term friendships and trusted contacts, which have been established over many years of mutual involvement in criminal ventures.

The following list outlines examples of the crimes committed by gang members and that are the main crimes investigated by the gang squad, as outlined on the Police intranet:

- Armed robbery
- Car theft
- Coercion of women into illegal prostitution
- Corruption of public officials
- Cyber-bullying
- Drive-by shootings
- Drug importation and distribution
- Extortion
- Firearms offences
- Fraud
- Homicide
- Human trafficking
- Internet crimes, such as identity theft, computer hacking, and "phishing" schemes
- Intimidation
- Large-scale theft
- Money laundering – where Gang members process profits from criminal activities such as drug trafficking and prostitution, through legitimate companies, such as

music businesses, beauty shops, auto repair shops, tattoo parlours and dry cleaning businesses

- Motor vehicle re-birthing – where primarily motor cars are dismantled for their parts and reconstructed as legally registered vehicles
- Organised motor vehicle theft
- Organised shop-stealing
- Ram raids
- Related financial criminal activities
- Violence and intimidation
- Violent robberies including "home invasions"
- White-collar crime.

Challenges for Police

In order to have the best possible chance of a successful prosecution and to successfully disrupt gang activity through a judicial process, investigators require timely information of the crime event and timely access to evidence found within crime scenes. As an example, forensic or biological samples such as blood and Deoxyribonucleic acid (DNA) degrade rapidly when exposed to the elements. However, early notification of the occurrence of a crime is often not forthcoming when criminal gangs are involved, as the desire to seek assistance from law enforcement is not present. Victims and witnesses may fear retribution if a report is made, and as gang members are often both victim and POI, there is often a tendency to conceal the criminal action and destroy evidence prior to the often unavoidable involvement of police.

There are some specific challenges for police when monitoring, managing and solving gang-specific homicides:

- Commercial considerations (impact on local businesses or the need to close off roads when a gang homicide occurs in a public location, requiring more time to process)
- Forensic Services Group (crime scene specialists who need to take more precautions where gang involvement is suspected, since biohazardous materials, weapons or explosive compounds may be present at the scene)
- Incident Reconstruction Section (gang-related crimes often involve more participants, adding multiple complexity factors)
- Media interest (gang-related crimes often generate media stories that produce strong public and political responses)
- Co-committed crimes requiring multi-agency input.

To meet some of these challenges, NSW Police have created specific squads with specialised members and skill sets. These specialists include proactive operations through Strike Forces (SFs), such as SF Raptor[53]. The Squad works in partnership with the NSW Crime Commission, Australian Crime Commission, other law enforcement jurisdictions and Government agencies to target and investigate the illegal activities of these criminal organisations which operate across state borders. Hence, this national perspective permits access to information which would not otherwise be available to a state law enforcement agency, and assists with the

[53] Strike Force Raptor was launched on 27 March 2009 to target the illegal activities of, and prevent violence between, Outlaw Motorcycle Gangs. It was established for a specific, short-term operation, but its success resulted in continuous operation until now.

complexity of multi-jurisdictional crimes. Future research should review the extent to which the Crime Commission aids or increases homicide solvability.

Third parties, who may not be witnesses to the incident, may come into possession of relevant information, such as: being at the scene, but not necessarily being aware at the time of the incident; by word of mouth; through interaction with other criminal elements; from the POI; and by use of social and media networks. Whether third parties are prepared to divulge information is dependent on a number of factors, such as their relationship with the POI, the need for assistance from the police (such as a reduction on other charges) or the fear of retaliation from the POI or others (Riedel, 1995).

Jarvis and colleagues highlight two more factors in the study that discourage witness cooperation: the widely practised "code of silence" mentality, in that gang members do not inform on other gang members; and the promise of retaliation against any member who does inform on others (Jarvis, Keel, & Muirhead, 2009). They add that victims and witnesses often cite corrupt and racist law enforcement agencies as a reason for non-assistance and that any form of cooperation with police, irrespective of reason, can lead to violent reprisal by gang members or other criminals.

Police and Solvability for Gang Crime

It remains one of the key paradoxes of policing studies that homicide investigation is one of the most publicly visible and concomitantly least understood aspects of the police function. When mass media discuss policing, it routinely occurs in relation to a story pivoting around an unexplained violent "murder". And yet, this

level of popular attention serves to obscure the overall understanding of how police respond to a sudden violent death, a point made by Brodeur (2010) arguing that empirical research on policing has tended to be dominated by studies of uniformed officers and the patrol function.

In response to political pressure after a very public incident at Sydney airport, where an associate of a well-known CMG was killed in public, the police established Strike Force Raptor. Block and Block posit that "expressive violent acts tend to begin as a fight, brawl, or argument that occurs relatively spontaneously with little rational planning", which covers the majority of homicide events (1999, p. 40). In contrast, gang homicides more often fall into the category of instrumental violence, which involves careful planning and is usually committed against acquaintances or strangers (Block & Block 1992; Wolfgang 1958). The result for investigators is that instrumental violence homicides are more difficult to solve, because of the lack of relationship between the POI and the victim, and because of the purposeful planning by the criminals. When these events occur as co-committed crimes, such as robbery-homicide or sex-homicide, the complexity increases for investigators (Mouzos, 2003).

The lack of a significant effect for co-committed homicide suggests that this may be a more heterogeneous category than previously thought, with some cases being cleared quickly and others are posing significant obstacles to clearance. This finding has important implications for researchers, as it may be difficult if not impossible to differentiate between the two in the types of police data typically used to study homicide clearances. SF Raptor went on to complete 317 arrests, with 619

charges laid, in its first four months of operation (Kelly, 2009). These charges would have encompassed a wide variety of crimes, in addition to homicide, but demonstrate that even the most complex of crimes can be solved, given sufficient time and extensive resources.

Research suggests that organised gang crime negatively affects homicide clearance rates (Finn & Healey 1996; Koedam 1993) because POIs in these gangs perpetrate more co-committed violent crime, which is usually premeditated, well planned and committed by POIs who are forensically aware. They also engage in witness intimidation and undermining of police investigation by providing deliberately misleading information ("red herrings"; Litwin 2004; Puckett & Lundman 2003; Regoeczi et al., 2000; Wellford & Cronin 1999, 2000).

The results from this section on NSW Police data related to gang crimes are blended in a comparison and contrast exercise with child homicide in the discussion below.

Discussion - Comparing Child and Gang-Related Homicide

The findings suggest that the police response to homicide may be influenced by a number of case characteristics, the presence or indeed lack of which may have a direct effect on the efficiency and results on clearance rates. However, what may be more significant are the implications of a case being declared as "unsolved". The descriptive analyses clearly identified that the likelihood of clearing a case markedly decreases as time passes. These analyses indicate that homicides can go "cold" as little as two weeks after the incident becomes known, especially where there are no known witnesses, lack of forensic evidence or a poorly secured crime scene. Such

results suggest that the case could be better served if resources such as the unsolved homicide squad and other supporting assets were tasked earlier in the investigation.

In contrast to the child homicide cases, the results of the gang-related homicides illustrate the greater complexity of the three main evidentiary solvability factors – crime scene location, victim-offender relationship, and weapon. NSW Police have been able to solve the majority of gang-related homicides occurring in this state between 1997 and 2013. However, compared to other types of homicide, those involving gangs take additional time to clear, which factor appears commensurate with the complexities of the cases and subsequent investigations.

In order to examine what factors differentiate homicide types in NSW, a comparative analysis was undertaken between child and gang homicides in relation to the following three main variables that are present and relevant to both homicide types: crime scene location, victim-offender relationship and weapon (cause of death). The results revealed that there were important differences in the solvability factors present at the crime scene location, within the (known) victim-offender relationship and the choice of weapon (that caused the death) on the length of time (from initial 000 call to case cleared) that it took police to solve and close the case. These considerable differences will be discussed below.

Crime Scene

When gangs attack each other in public spaces, using lethal violence, they tend to do so with complete disregard for by-standers or eyewitnesses to the crime, who may also be intimidated by threats of violence. The crime scene will reflect the nature of the homicide, such as a drug-related incident, where drug paraphernalia

may be present, or the area has been ransacked in an attempt to locate concealed cash, drugs or weapons. The amount and value of forensic evidence in a child homicide scene is often different from that found at the scenes of gang homicides, for which there are three reasons. Firstly, because most children are killed inside a residence, it is an enclosed, protected crime scene, in contrast to gang homicides, which more often occur in public locations and can more easily be disturbed and contaminated. Secondly, any DNA or trace evidence will have limited value for investigation purposes if found within the victim's or POI's residence when they live together, due to the fact that trace evidence would be expected to be present as a result of normal living habits. Thirdly, in crime scenes that are in the open, climatic conditions such as weather patterns can affect the presence of and ultimately the quality of any forensic evidence.

Gang homicides are examples of premeditated, instrumental violence[54] as explained by extant research (Chase, O'Leary, & Heyman, 2001; Cornell et al., 1996; Houston, Stanford, Villemarette-Pittman, Conklin, & Helfritz, 2003) because they are often well planned and deliberate between acquaintances or strangers. Some of the differences include: crime scenes having 'moving targets', as drive-by shootings are quite common in gang-homicides, and often the cars used in the commission of the offences may be stolen and then burnt out to avoid detection where POIs are forensically aware.

[54] Defined as a proactive 'cold-blooded' form of aggression (e.g., Barratt, 1991; Cornell, Warren, Hawk, Stafford, Oram, & Pine, 1996; Dodge & Coie, 1987; Kingsbury et al., 1997; Meloy, 1988).

Extant Australian research by Chan and Payne (2013) supports the findings of this thesis in that many acquaintance and stranger type homicides occur in public spaces. In fact, this research demonstrated that the majority of *unsolved* gang-related homicide cases take place in open or public spaces more often than in a residence (56.9%). The crime scene location affects clearance rates, particularly where a crime scene is not protected, or where the victim has been murdered at one location, then disposed of at the place they were eventually discovered, thus leaving little evidence other than the victim for the forensic services staff to collect and process. It will take investigators time to discover the initial crime scene and with the passage of time and the possibility of contamination or destruction of evidence, chances of successfully solving the case diminish. The findings of this research also identified that a crime scene inside a private residence leads to a shorter time to clear the case (when compared to other homicides not involving children as victims). This is due to the fact that the residence is more likely to be the site of violent death involving people who know one another.

> ***Case Study Five***[55]:
> It was winter in the southern suburbs of Sydney when a male victim in his late twenties was discovered, suffering multiple gunshot wounds to his knee, stomach and neck. He was found in the very early hours of the morning in the rear parking lot of a large industrial estate. As part of their investigation, police attended the victim's residence, where they found his house ransacked and according to his parents, nothing was stolen. Neighbours reported to police that two men had been seen parked outside for nights on end, apparently keeping watch on the house. One month prior to the murder, children inside the house had been threatened – proved by investigators

[55] In agreement with the (previous) Commander of NSW Police Homicide Squad this case study and the next are six real cases blended into two case studies for purposes of de-identification.

> finding letters allegedly threatening the death of all family members living in the residence. The person named as the POI has spent almost his entire adult life in gaol and has significant links to the underworld. This case remains unsolved as there is insufficient evidence for DPP to proceed.

As previously explained, clearance of homicides that occur in public spaces takes longer than those that take place in residences. Therefore, homicides occurring in public areas may have extended clearance times as they rely on additional factors, most significantly witnesses, and it is often a time-consuming task to identify, locate and obtain cooperation from these individuals. It may be the case that gang members are only prepared to assist investigators when they are in need of a "deal" where they have themselves become involved in a criminal act. These factors can leave the case unsolved for a substantial period.

A significant factor determining the likelihood of solving or not solving a homicide was to establish whether the crime took place in tandem with another offence, such as a robbery, sexual attack or drug "rip"[56]. Comparative analysis showed that homicides which remained unsolved were much more likely to have been connected to the commission of another crime than those which were solved (22.6% and 11.9% respectively). When compared to homicides which result from arguments, homicides involving other or unknown circumstances are more likely to remain unsolved or at best, open for a longer period.

In cases where the causal factors are not clear, longer clearance times would normally be the result. The lack of known circumstances likely reflects a paucity of

[56] A drug 'rip' can be defined in three ways, either the buyer is sold poor quality; expensive drugs or the person selling them is accosted and the drugs and any cash on that person is stolen.

information, forensic evidence and/or witnesses, all of which would be needed to quickly identify a POI.

Victim-offender relationship

This study suggests that step-parenting is a major risk factor for child homicide. One explanation for this issue is that that step-fathers might experience huge pressure from members of their family to "feel and act like natural parents, a pressure they often resist and resent, sometimes violently" (Daly & Wilson, 1994, p. 208). The lack of a natural and protective connection between the child and their step-parent has also been noted as a major risk factor. It can be argued that the absence of a genetic link between step-parent and child, mixed with financial strain, change in intimate partner and personal insecurity, provided a "clear indicator for increased risk of maltreatment" (Strange, 1995, p. 83). Furthermore, the victim-offender relationship can contribute to the clearance of residential location homicides because it establishes the likelihood that the victim knew the offender, such as a family member, intimate partner or an acquaintance.

The results of this research support extant studies that illustrated that children were less likely to be killed by a parent as the child grew older (Adinkrah, 2001; Bourget & Gagné, 2002; Dean, 2004; Friedman, Holden, Hrouda, & Resnick, 2008; Hatters Friedman, McCue Horwitz, & Resnick, 2005; Koenen & Thompson, 2008; Richardson & Bromfield, 2005; Smithey, 1998; Somander & Rammer, 1991; Stroud & Pritchard, 2001; Trocmé, MacMillan, Fallon, & De Marco, 2003). Additional research needs to be conducted into this phenomenon in non-Anglo nations.

Results demonstrated that while gang-related homicide may possess features of both "expressive" and "instrumental" violence, it is usually motivated more by

membership in the gang than anything else. Motives for gang-related homicides that were identified in this research were:

- representing (the offence results from a signaling of gang identity or alliance by hand signs, language or clothing)
- recruitment
- intimidation (of a victim or witness)
- 'turf' (territory) violation
- prestige (to glorify the gang or gain rank within the gang)
- personal conflict (within gang)
- extortion (efforts to compel membership in the gang or exact payment from local business or independent drug dealers within the gang's territory)
- vice (usually distribution of drugs by gang members), and
- retaliation.

Where gang rivalry and revenge are the motivations for the homicide, the relationship between the victim and the POI may not be readily evident until police identify the affiliation with a particular gang. In contrast, where the gang affiliation is evidenced by tattoos or branded apparel, knowledge of the gangs and their traditional activities and targets will assist police in identifying likely POIs. Victims who are affiliated with gangs were more likely killed by another rival gang member, resulting in probable witnesses often being reluctant to collaborate with authorities. Hence, this type of homicide will have poorer chances of being solved, as previously identified by Santacruz and Concha-Eastman (2001). Purposeful obstruction tactics

and the employment of "red herring" impediments, being deliberately misleading information, specifically related to gang- and drug-related homicides, which are often co-committed, create difficulties for cases to be solved and therefore lower clearance rates for these types of homicides (Litwin, 2004; Puckett & Lundman, 2003; Regoeczi et al., 2000; Wellford & Cronin, 1999, 2000).

In NSW, results show that most of the gang-related homicides were premeditated (COPS data, 2013), and targeted a particular person for very specific reasons, as opposed to a random act of homicide. Some gang-related homicides included "staging" or planting of false evidence at a crime scene, as well as "red herrings" Ferguson, 2012). "Red herrings" and staging crime scenes were used by POIs to divert police attention away from the relationship between the victim and POI. In the majority of gang homicides that showed signs of staging, the POI altered the scene to make it appear that something other than what really happened had occurred. Investigating the '"false scene" took detectives more time and gave the POI time to create an alibi, destroy the physical evidence and manipulate witnesses to the homicide. Research by Finn and Healey (1996) and Koedam (1993) supports the premise that clearance rates nationally in the US are directly affected – lowered – by the involvement of organised crime gangs.

Weapon

A problem in relation to firearm-related deaths was seen to exist after the Port Arthur Massacre in 1996, when the number of homicides drastically increased for that year. Recognising that the problem was in part related to firearms and their availability, policy makers implemented a "buy back scheme", where self-loading

rifles and pump-action shotguns could be returned to authorities without penalty under a 12-month firearms amnesty and compensation scheme (Attorney General's Department, 1997). The Australian Government reforms of 1996 also included a nation-wide licensing and registration framework. As a result of these policies, the overall number of firearms used in homicides post-1996 decreased and this trend continues (Mouzos, 2000). However, closer examination of the statistics reveals that offenders have either changed the type of firearm they use (that which is most readily available, supporting Wolfgang's theory) or they are resorting to other weapons to perpetrate the homicide, as evidenced by the fact that homicide numbers did not decrease quickly after the gun buy-back.

Research by Nielssen et al. (2009) supports the longitudinal research available from the NHMP and COPS data, positing that over one third of all child homicides was a result of child abuse and assaultive force. The use of a sharp implement was the most frequent cause of death in both domestic and acquaintance homicides. In stranger homicides, physical force such as punching or kicking was the most common cause of death. Other differences between homicide event types show that firearms were more likely to be used in acquaintance homicides than in domestic or stranger homicides. Homicides where firearms have been used have decreased since the NHMP started recording information in 1989-1990. As an example, firearms were used in 25% of homicides in 1989–1990 (n = 76), while the figures for 2009-2010 showed that only 12% (n = 31) of homicide events involved firearms. By contrast, the

number of homicides involving sharp implements such as knives has increased from 30% to 41% over the same period (Chan & Payne, 2013).

Contact with sharp objects and firearms are the two most common mechanisms of homicide in gang homicides, usually accounting for more than half of all homicides as reported by UNDOC (2011). The total homicide rate in countries in general is closely associated with the rate of firearm homicides. More violent countries (those with higher total homicide rates) have higher rates of firearm homicides, while sharp object homicide rates show less variation in countries that manifest varying levels of violence (UNDOC, 2011).

The proportion of homicide incidents in Australia during the period 1998-2013 involving a firearm increased to 12% (n = 30), although of note, the involvement of firearms in homicide incidents remains at an historical low in NSW and across the country (Chan & Payne, 2013). The majority of firearms were identified as being either unregistered and/or unlicensed. The method used to kill the victim has been identified as a major solvability factor (Mouzos & Muller, 2001; Puckett & Lundman, 2003; Strang, 1992; Wellford & Cronin, 1999). Where the victim was stabbed, beaten or strangled, the case was more likely to be solved (Mouzos & Muller, 2001; Wellford & Cronin, 1999).

Close-contact weapons like knives, blunt instruments, and assaultive force (using hands or feet) bring the victim and person of interest in close proximity to each other, so the opportunity for physical evidence to be transferred from the offender onto the victim and vice versa becomes increasingly high (Addington, 2006;

Puckett & Lundman, 2003; Regoeczi et al., 2008; Roberts, 2007). In relation to the impact that use of a weapon has on clearance times, assaultive force cases committed with hands or feet are likely to be cleared sooner, as the close proximity between victim and offender will usually result in a greater amount of forensic or physical evidence. For example, child homicides are potentially more solvable, given the intimate and close nature of the crime, as the POI will often deposit more physical evidence. Another factor in such crimes is that the POI is more often closely related or well known to the victim. Homicides committed with personal assaultive force are less likely to be pre-planned than those carried out using weapons such as knives or firearms. This lack of planning increases the chance of there being witnesses to the crime and the availability of other evidence.

By contrast, homicides perpetrated with firearms or knives are likely to take longer to clear, as they are most likely to involve greater planning and be carried out by people who are either unknown to each other or at best only casual acquaintances. Physical attributes come into play when a more intimate weapon requiring close interaction with the victim is used. This in turn increases the chance of having other factors present in the incident, including DNA transfer from bodily fluids, but also introduces contact trace transfer, such as fibres and fingerprints. It also increases the chance that the victim and POI are known to each other.

The majority of gang-related homicide cases (54.1%, n = 51) within this research study involved the use of a firearm as cause of death, whereas in all other non-gang-related homicides, the use of a firearm was only 15.3% (n = 243). This

study determined that firearm-related gang-homicides have a lower chance of being solved than homicides carried out with any other form of weapon. Regoeczi et al. (2000), Litwin (2004), Addington (2006), Alderden and Lavery (2007), and Roberts (2007) support this finding. For police investigators, the Integrated Ballistic Identification System (IBIS) allows firearms to be traced, and presents an opportunity to link homicides in which the same firearm has been used. In 2001, the head of the NSW Police Ballistics Unit, Sergeant Wayne Hoffman, was quoted as saying:

> In 70 minutes we were able to do what would have taken 100 years or basically a lifetime to perform . . . This is a major breakthrough in crime fighting . . . it is a way forward and has brought things out of the dark ages. (Daily Telegraph, March 15, p. 10)

In contrast, contact weapons and firearms decrease the likelihood of clearance. The rationale behind the decreased solvability in homicide cases where a firearm was the murder weapon is that the distance between the offender and victim increases and ultimately results in the diminished opportunity for any evidence to be left behind. Forensic ballistics testing can link a POI to the firearm that they used; however, this also creates an obstacle for homicide detectives due to the lucrative underground business of the firearm market, which can result in numerous dead-end leads and a lack of suspects. It is a reasonable theoretical proposition that homicides carried out using either sharp or blunt implements, or those where the victim has been strangled or asphyxiated, are typically more personal than firearm-related homicides.

As weapon of choice, second only to firearms were "sharps", defined as any object inflicting a sharp force wound such as a knife, razor, or screwdriver. Data illustrate that knives were the second most frequently used weapon, with assaultive force (i.e., hands or feet) being the third. The category of "other" ranked as third and included fire, poison, drugs and vehicles. Firearms ranked fourth (NSW Police Dataset, 2013). The number of homicides involving knives and sharps has remained relatively unchanged since 1998, although owing to the decline in firearm homicides, knife-related homicides make up a larger proportion of homicides recorded in the more recent data (Chan & Payne, 2013; NSW Police Dataset, 2013).

Summary

This chapter presents results of the differences of two disparate homicide types to their individual solvability factors and chances of eventual case clearance. The findings indicate that the three factors – victim-offender relationship, crime scene and weapons – are associated with the timing and success of clearance for police. Cases involving homicide of a child, in a private residence using assaultive force, were cleared sooner. This pattern is likely attributable to the high likelihood of the victim being killed by a family member and is supported by extant research (Alderden & Lavery, 2007; Cardarelli & Cavanagh, 1992; Regoeczi et al., 2000).

Compared to homicides committed with sharps, assaultive force cases clear more quickly. This finding supports the common contention that personal weapons (hands, fists, and feet) are more characteristic of interpersonal violence between intimate partners, which has both higher and quicker clearance rates and is supported by previous research conducted by Cardarelli and Cavanagh (1992),

Simon (1991) and Wilbanks (1984). Finally, homicides involving unknown motive or circumstances are more likely both to remain unsolved and remain uncleared for longer periods of time. It makes sense that in cases where the circumstances cannot clearly be identified, longer timelines for investigations occur; the lack of known circumstances likely reflects a lack of information, evidence, and/or witnesses needed to quickly identify a suspect.

Situations involving organised criminal gangs may pose difficulties in terms of securing witnesses who are willing to identify the perpetrator. Under such circumstances, it may only be when the gang members are in need of a deal with police or prosecutors because of unrelated crimes that they have committed that they become willing to cooperate, so that such a case remains uncleared for some time. The lack of a significant effect for homicides in NSW suggests that this may be a more heterogeneous category than previously thought, with some cases being cleared quickly and others are posing significant obstacles to clearance. This is a significant finding that has important implications for academics and researchers, as it may be difficult if not impossible to differentiate between the two in the types of police data typically used to study homicide clearances.

This research, similar to other studies (Castro, 2011), suggests that the efficiency and effectiveness of police response to homicide may be influenced by certain case characteristics. However, what may be more important are the implications for when a case is likely to become “cold”. The descriptive analysis clearly showed that the probability of case clearance markedly declines with the

passage of time (see Table 15). In fact, analysis suggests that homicides can "go cold" as soon as two weeks after the case is reported. If knowledge of the victim-offender relationship, weapon or crime scene data is missing from evidence and investigations, such results suggest that cold-case squads and other resource allocation may be better employed if mobilised earlier in the investigation of homicides.

COPS data provide significant advantages for studying clearances with the inclusion of information on the timing of both the event and the arrest (NSW Police dataset, 2013). However, they encompass some of the same limitations as other secondary data sets on crime. In particular, they lack detailed information on the procedural aspects and time-varying characteristics of specific homicide investigations, which limits the researcher's ability to test a strong predictive model of clearances. Overall, the results reinforce that much is to be learned from shifting the conceptualisation of solved from the traditional dichotomy of solved/unsolved, to an examination of the length of time to clearance. In terms of future research, the inclusion of other data such as the structure, operations, and resources of police departments may help to improve the models. The use of such data poses its own set of challenges, but the future of understanding more about the ways to increase case clearances for not only homicide but other crimes may well depend upon such efforts.

Having analysed and compared child and gang homicide to better identify how specific factors and characteristics directly affect the ability of police to solve the

cases and also the time taken to do so, the next chapter will offer a brief history of victimology, some of the theories supporting it and then a major segment on Criminal Profiling. It does this to show the likeness and distinct differences between criminal profiling and Applied Victimology. It will also use this discussion to introduce the new Applied Victimology matrix, to be used predominantly in police investigations of unsolved, serial or more complex homicides, such as co-committed homicides involving sex or robbery.

Chapter 5: Considering Victim Variables

> After nearly a decade since the jury delivered the *guilty* verdict, I am still forced to focus on my mother's killer. If the killer was given life without parole, you know what I mean, a true sentence for life, I would not be here. I would not be forced to discuss her killer, the verdict and the ways in which my life has been affected over and over. Each court date, every appeal, all the newspaper clippings, visiting and revisiting the pain, each and every event keeping me that much further from the healing that I and my family so greatly deserve (Case ID: SH013V1SUG).

Introduction

The quote above describes the pain, frustration and, even anger that friends and family of homicide victims articulate in regards to the continuing journey that they must make, whether they want to or not. This chapter was developed directly from the results of the previous chapters, since it was discovered that if the victim was known to the Person of Interest (POI), *and* the homicide event occurred in a private area, *and* the victim was killed as a result of assaultive force, bringing the victim and the POI in close contact to one another, the case cleared more quickly than those that did not share these particular variables. This chapter argues for a paradigm shift in the way homicide investigations are run, that is, to re-focus attention away from the POI, and add more significant focus to the victim.

Research in this thesis has identified evidentiary and extra-legal solvability factors relating to the POI, crime scenes, and police (see Table 20). Now well

informed about the major elements specific to a homicide incident, the final sphere to be examined are factors relating to the victim. Local and international literature identified solvability factors such as age, gender, ethnicity and weapon, so an attempt was made to identify new extra-legal factors that focused specifically on the victim, to determine whether they could open new lines of inquiry for the police. In relation to the aims of the thesis, this chapter identifies victim-specific extra-legal solvability factors, both old and new, that may increase homicide clearance.

This chapter begins with a literature review relating to victims, victimology and criminal profiling, in an attempt to identify solvability factors that relate to the victim. Secondly, a short method section will discuss the process undertaken to collect data for a qualitative analysis and then the results will be a test of 40 Briefs of Evidence, provided to the researcher by the NSW State Crime Command Homicide Squad. A random sample of five solved and five unsolved cases will be provided to illustrate some of the key themes related to the use of Applied Victimology within homicide investigations. Thirdly, the chapter will discuss which of these variables appear in the majority of solved cases, in contrast to what is missing from the unsolved cohort. Finally, this chapter will demonstrate research-to-practice translation of the results using a proof-of-concept solution that has been developed, implemented and evaluated for a specific priority area, applied victimology in action.

All four spheres of the Venn diagram (Figure 2) have been investigated and current and new solvability factors have been identified. To test the validity and

generalisability of the applied victimology matrix, 40 cases – 20 solved and 20 unsolved – were reviewed. For the purposes of reporting the results for the thesis, a sample size of five solved and five unsolved Briefs have been included in this chapter to illustrate the general themes identified. Applied victimology constitutes a novel approach to creating a victim-centric investigation, as crime victims have historically been relegated to evidentiary instruments of the investigation and courts (Schneider 2001), whereas the victim here becomes the main focus of inquiry and the main source of information rather than just a "piece of evidence", which it is hypothesised significantly adds to the solvability of the case. Throughout this thesis, new or infrequently recorded (in COPS) solvability factors have been identified that may, after appropriate testing, assist police in the future. To understand the future the past must be considered.

History of Victimology

Historically, the study of victimology spans from 1764 when Beccaria noted that "excessive power constitutes abuse of power" and challenged society to alter their mindset and regard power as an instrument to "enhance the good of all" (Kirchhoff, 2006, pp. 8-10). According to Kirchhoff, Beccaria created the concept of "victimology" when he proffered ideals of resolute Catholicism, ritualistic sadistic punishment and torture, as well as archaic views of the State. Over a century later, in 1884 Enrico Ferri identified that a central goal in the judicial procedure was to assist the victim in processing through the criminal justice system and being compensated for their ongoing issues, related to their victim-status. This process is now known as restorative justice, restitution and victim-compensation. Much later, in 1963 (New

Zealand) and in 1964 (United Kingdom), the movement relating to legislated victims' compensation was introduced (Burns, 1992). Dussich notes that the mid-sixties saw the acceptance of victimology in the US, Japan and Canada (Burns, 1992).

Dussich credits Mendelsohn as the "Father of Victimology" because in 1956 he created the term "victimology" in his academic publications. He proposed the creation of the World Society of Victimology and the establishment of victimological institutes. Both Mendelsohn and Von Hentig concentrated on victim characteristics, behaviour and the person's individual propensity to be victimised. Von Hentig created victim typologies and theorised that some were "victim-prone" (Schultz, 2010, p. 3). Schultz further discussed "victim blaming" which undermines advances in the study of victimology and continues in current literature (Schultz, 2010, p. 4).

The concept of "victim" is founded in ancient civilisations, and its original meaning was rooted in the idea of sacrifice, such as executing a person to satisfy a deity (Karmen, 1990). Over past centuries, the word "victim" has changed and developed in line with social norms relevant to the culture of the day. Presently, the international legal definition for a victim of crime includes the following:

> A person who has suffered direct or threatened, physical, emotional or pecuniary harm as a result of the commission of a crime; or in the case of a victim being an institutional entity, any of the same harms by an individual or authorized representative of another entity. Group harms are normally covered under civil and constitutional law, with "hate crime" being an

> emerging criminal law development, although criminal law tends to treat all cases as individualized. (UNDOC, 2011, p. 2)

Besides "primary victims", there are also "secondary victims" who experience the harm second-hand or vicariously, such as family members, witnesses and intimate partners of a homicide victim. Emergency service personnel, paramedics, Doctors and psychologists are amongst professions that are considered to be vicariously victimised within their careers. Equally, there appears to be a fascination with why people commit violent crimes, as opposed to those who fall victim of it. Research has consistently shown that crime is distorted in favor of uncommon events (Chermak, 1995; Ericson et al., 1991; Fishman, 1980; Gans, 1979; Tuchman, 1973). This same research discovered that homicides were overrepresented whilst high volume crimes, like assault, are largely ignored (Buckler & Travis, 2005; Johnstone, Hawkins, & Michener, 1995; Lundman, 2003; Paulsen, 2003; Peelo, Francis, Soothill, Pearson, & Ackerly, 2004; Pritchard, 1985; Pritchard & Hughes, 1997; Sorenson, Manz, & Berk, 1998; Weiss & Chermak, 1998; Wilbanks, 1984).

Few people unrelated to the victims appear to care who becomes victims of homicide, or how and why they become involved. This sentiment is partially true of historic police investigations. Since the *raison d'être* of homicide investigators is to identify and arrest the POI, police focus appears directed mostly at the POI. This creates the possibility that some victim variables may be overlooked within an investigation, which could be due to the large amount of information, cognitive bias, POI focus, the victim themselves (Black 1979) or limited resources provided to police

for investigations that extend long term (over two weeks).

Victimology has evolved into "the scientific study of the social science of (man-made) victims, victimisations by Human Rights violations including crime, and the (existing and desirable) reactions towards both" (Kirchhoff, 2008, p. 113). Schultz (2010) adds that research by Karmen (1990) includes in his definition of victimology the relationships between victim and POI as well as interactions with the criminal justice system. Jaishankar counters that to date "victimology has not been recognised as a distinct academic discipline" (2008, p. 1) and cites that as recently as 1985, Cressey declared that victimology is "a non-academic programme under which a hodgepodge of ideas, interests, ideologies and research methods has been rather arbitrarily grouped." Karmen broadly defined the study of victimology as:

> The scientific study of victimization, including the relationships between victims and offenders, the interactions between victims and the criminal justice system – that is, the police and courts, and corrections officials – and the connections between victims and other societal groups and institutions, such as the media, businesses, and social movements. (1990, p. 3)

Victimologists carry out estimations of victimisation rates and risks from surveys of large numbers of people about the crimes that have been committed against them because official police statistics are known to be incomplete. Theoretical victimology defines the problem, identifies the asymmetry, analyses responsibility and explores the kinds of harm experienced by the individual and society. In reviewing criminal victimisation at a societal level, theoretical victimology attempts

to measure the true dimension of the problem, analyse statistics, and see what kind of people are involved to accurately gauge the extent of harm. The theory and its followers investigate how the criminal justice system copes with the problem and reviews what is missing from the system. It concentrates on what the victim wants and needs, and analyses the effects of victim interaction and tracks the emergence of the victim's movements across time. Finally, victimology examines societal response to crime – looks at legal issues, analyses proposed new legislation or changes to old, and analyses media reactions.

Mendelsohn (1937, p. 6) interviewed victims to obtain information, and his analysis led him to believe that most had an "unconscious aptitude for being victimized." He created a typology of six (6) types of victim, with only the first type, the *innocent*, portrayed as just being in the wrong place at the wrong time. The other five types all contributed somehow to their own injury, and represented victim participation. This viewpoint was vigorously attacked by feminists in the 1980s, and was replaced by the notion of victims as anyone caught up in an asymmetric relationship or situation, where "asymmetry" means anything unbalanced, exploitative or destructive.

Von Hentig (1948) studied victims of homicide, and identified vulnerable typologies. The most likely type of victim is the "depressive" who is an easy target, careless and unsuspecting. The "greedy" type is next, being easily duped because his or her motivation for easy gain lowers his or her natural tendency to be suspicious and finally, the "wanton" type is next, being particularly vulnerable to stresses that

occur at a given period in the life cycle, such as adolescents becoming juvenile victims. Following on from Von Hentig, Wolfgang (1958) asserted that victims precipitated homicides with their subliminal desire to commit suicide. Schafer (1968) supported this view, analysing how victims consciously or unconsciously by their actions and attitudes contributed to the homicide, and hence, shared some responsibility for the crime.

Victim Blaming

Over the years, ideas about victim precipitation of the crime have come to be perceived as negative, and have been dubbed "victim blaming". Victimology is concerned with why people become crime victims, whether some people are at a higher risk of becoming victims, the treatment of victims during criminal investigations, and post-judicial process trauma informed healing. Traditionally, the victim has only played a peripheral role in the criminal justice system, only called upon as a witness or perceived as part of the evidence, largely being overlooked, while the focus and resources have been directed towards the POI (Christie, 1977).

Since the 1980s, a shift has occurred, with renewed attention paid to the role of the victim. Within the European discourse, this largely emanated from feminist writers and social justice advocates arguing for a more inclusive criminal justice system in which the victim played a central role (Davis, Francis, & Greer, 2007). In the US, the discourse has been tainted by "victim blaming", where the victim is seen as having a significant responsibility for their own victimisation, in crimes ranging from murder and rape to domestic violence, robbery and theft (Karmen, 2001). It

could be argued that this latter perspective does not serve a useful purpose, but instead absolves POIs of responsibility for their actions.

The notion of victim blaming and victimisation has been surrounded in controversy, as evidenced by comments from various attorneys in murder trials made to families of the victims:

> There is no such thing as a victim, it is just a state of mind…
>
> I don't know what you people are so upset about. Eleven children could have just as easily been killed in a bus accident. If they're dead, they're dead'.
>
> (Canadian Resource Centre for Victims of Crime, 1998, p. 3)

The harm incurred from such insensitive remarks by those within the criminal justice system underscores the need for improvements to judicial processes for victims, and also indicates that the study of victims and victimology has a long way to go until it is understood and respected as an academic pursuit.

There have been many years, particularly in the US, where blaming the victim for precipitating the crime against them has not only devastated the victim (a second time) but also given the POI some reprieve and an opportunity to "explain away" their actions. This section will not blame the victim, but will demonstrate the importance of focusing investigation on their involvement, reactions and behaviour prior to and at the time of the crime.

Victim motivation needs to be examined in relation to a complete investigation as it will situate that individual in the proper context in relation to why *this* person is *the* victim in *this* incident. Police focus on a homicide victim has been

seen as blaming or targeting by victim support groups, lawyers and family or associates of the victims (Carlyle, Slater, & Chakroff, 2008). However, it is critically important to note that if police ignore the victim's interaction with the POI or even precipitative actions by the victim towards the incident, then they potentially lose approximately 30% of the explanatory 'formula' (victim + offender = crime scene). Therefore, in investigating the victim's history, motivation for being at the place of the homicide event and perhaps the interaction with the POI, the police looked as though they were blaming the victim as opposed to using the victim's knowledge, lifestyle, risk, behaviour, and history to help solve the crime.

Castro (2011) tested Blacks Law (1980) where she hypothesised that police in San Angelus Police Department (SAPD) investigated, judged and treated Hispanic victims of homicide differently from Caucasian victims. Her research concluded that police did not solve and clear homicides with any victim cohort any differently; in other words, the victim's race was not relevant to the SAPD. Victims' advocate groups consider research into ways in which the victim 'contributes' to their own victimisation as both unacceptable and destructive. Yet a few enduring models still exist, for example:

- Luckenbill's (1977) Situated Transaction Model – states that at an interpersonal level, crime and victimisation are a contest of character. To illustrate this model, consider Case ID: 01SHV1JAD:
    - *Insult* – "you're a stupid c**t"
    - *Clarification* – "What did you say?"

- *Witnesses* escalate the situation by jeering and supporting one or either of the 'players' in this incident
- *Retaliation* – "I said f*ck –tard, you're a stupid c**t"
  - *Counter-retaliation* – "really, you f*ckin' poofter – come closer and say that again"
  - Victim steps closer prepared to repeat his initial insult and POI reacts
  - POI produces a weapon, striking the victim in the stomach three times in quick motion, leaving the weapon – a double-edged blade – in his belly
  - Victim collapses and is tended to by two witnesses (allegedly unknown to him), and dies where he is initially assaulted.

- Benjamin and Master's Threefold Model supports the idea that conditions that allow crime can be classified into three general categories:
  - Precipitating factors – time, space, being in the wrong place at the wrong time
  - Attracting factors – choices, options, daily or routine activities
  - Predisposing factors – all the sociodemographic characteristics of victims, such as being a young, poor, single male, living in squalor and being unemployed.

To illustrate this model, Case ID: 20SHV1LAP: The victim's body was found in his rented unit in 2002. He had died as a result of a gunshot wound and his partially burnt-out car was found nearby shortly afterwards. A Strike Force between two state jurisdictions is investigating this homicide, along with five others that have like modus operandi. One of the POIs, who was on day release from prison at the time,

abducted the victim from outside a smash repair business on a main street. Two of the cases have been charged and convicted; however the others are still being investigated.

- Cohen and Felson's (1979) Routine Activities Theory – crime occurs whenever three conditions come together, namely:
  - Suitable targets
  - Motivated POIs
  - Absence of guardians.

To illustrate this model Case ID: 17SHV1MOO: Early in 2010, the POI, wearing a grey-green hoodie over his face, crept into the victim's home. Confronting her as she arrived home from work, he cut her throat and stabbed her eight times in the chest, leaving her to die on the verandah of her home. The POI felt extreme anger and resentment towards his victim over her decision not to renew his contract as a nurse in the emergency ward of a Sydney Hospital. He believed the victim gave him a series of bad references, scaring off prospective employers to whom he had applied for jobs. Without work, the POI and his wife would lose their 457 work visas and be forced to leave the country, where he would be forced to pay outstanding child support to his ex-wife. The POI had made a number of reconnaissance visits to the home of his former boss to learn the layout and security of her house and had also called her home number from public phones to ascertain when she typically arrived home. The POI's children recalled how he had used them to practise a throat-cutting technique Marines used to kill enemy sentries silently, so he would be well prepared.

More Recently

Kirchhoff (2006) notes that the growth of victimology has been significantly influenced by the study of victim reactions, and how environmental factors contribute to secondary victimisation. Schneider (2001) adds that secondary victimisation allows re-victimisation to occur for both victim and co-victims (Kirchhoff, 2006, p. 541). The criminal justice process often creates secondary victimisation when inappropriate response to the criminal act occurs. This may be in the form of minimal sanctions or extensive court delays. Although participation in the judicial process often reaps benefits for victims, the system is wrought with obstacles. The victim may experience high levels of stress, painful memories, blame and emotional upheaval (Ellison, 2001; Wortman & Dintzer 1978). Investigative scrutiny and cross-examination by overzealous attorneys is yet another form of secondary victimisation within the arena of jurisprudence.

Jaishankar (2008) illustrates symptomatic failings that have hampered the growth of victimology, such as a lack of theoretical orientation. He identifies that Ronel's Criminal Spin theory, which maps the journey to victim status within the criminal realm, represents only a small portion of victimological theory and that new and broader theories are critical to its development. Jaishankar (2008) states that contemporary research lends primarily to compensatory, psychological and legal issues as basic tenets, and that a greater focus on victims' rights and assistance is necessary, along with a stronger theoretical focus.

In determining the changes in the study of victimology, it is important to examine the resulting impacts related to the role of the victim. Schultz (2010) cites

Fattah's work on direct victimisation as "the immediate and initial impact of the victimising experience on the person or people targeted by the victimizer"(p. 5). According to Schneider, the deliberation of damage suffered by victims is comprised of direct damage as well as indirect and secondary damage. Direct damage entails many symptoms such as depression, fear, hostility, somatic symptoms and shattered self-confidence (Schneider, 2001, p. 539). This has been a relatively new development, since historically, victim symptoms were not deemed to be of concern, particularly within the judicial process, and is listed as one of the primary reasons why victim-related crime remains significantly under-reported (Dingan, 2005, p. 30; Goodey, 2005, pp. 48-49).

Along with the recognition of the direct damage incurred from a single traumatic incident was the acknowledgement of increased psychological suffering of victims who had experienced repeat occurrences (Goodey, 2005, p. 59; Schultz, 2010, p. 7). Schneider (2001) supports that "the previous victimization is a reliable predictor of future victimization" and the probability of re-victimisation increases with each episode (p. 542). Moreover, the damage suffered by recidivist victims is the most difficult to treat and is strikingly illustrated in the example of domestic violence and child abuse victims. Schneider (2001, p. 540) classifies these young victims in four distinct categories based on the psychical damage, ranging from emotional disturbances such as sleep disorders and concentration deficits, social relationship dysfunctions, to cognitive distortions about the self and the most severe category, self-inflicted injuries and self-mutilation.

Hill (2009) cites that some victims are so traumatised that they present with physical, emotional and mental health problems long after the incident. This is in keeping with Post-Traumatic Stress Disorder (PTSD), which can develop into chronic and debilitating conditions with long-lasting symptoms after exposure to trauma (Wortman, Battle, & Lemkan, 1997). The prevalence of these symptoms can be seen in secondary victims or witnesses to homicide (Homicide Victim Support Group, 2013). Dingan (2005) outlines additional victimological theories including "radical victimology" which asserts that societal influences are at work in creating the framework for individuals to fall prey to victimisation, and encompasses legal and political agendas serving as significant drivers. This philosophy has met with criticism for its lack of analysis and consideration for factors such as gender, race and age (Dingan, 2005, pp. 33, 34).

Critical victimology aligns itself with patriarchy as the overarching mechanism which permeates the social backdrop. The feminist perspective has impacted this theory by recognising the issues of rape, sexual assaults, domestic violence and child abuse (Dingan, 2005, p. 35). Ultimately, it is the awareness of the countless nuances of reactions to trauma and potential impacts of victimisation that propels practitioners to delve more deeply into the study of victimology.

Victimological developments over past decades include the "victim-POI sequence" and controversy exists over risk enhancement by POIs who were once victims (Schneider, 2001, p. 541). Previous empirical data suggest that POIs were often victims of earlier trauma, such as young POIs who report physical and sexual

abuse or neglect in their childhood. Studies that found a "correlation between origin of delinquency and victimisation now indicate that the relationship is not as pronounced as previously assumed" (Schneider, 2001, p. 542). Schneider (2001) asserts that jurisprudence has favoured the accused in defending against arbitrary rule of the authoritarian state for many years.

The objective of this chapter's literature review was to evaluate a range of literature on victimology and profiling in order to reassess more creatively the role of the victim in homicide investigations. By examining the different variables relating to victimisation, such as age, gender, social class, ethnicity, socio-economic circumstances, police could better understand what the victim contributes to the crime (if anything) and therefore, contribute to solving their own homicide (especially where the POI is unknown). This concept has been raised previously within criminal profiling.

Victimology and Criminal Profiling

Criminal profiler Turvey (2010) defined victimology in a practical way - as a usable 'tool'. In his work, related to profiling and forensic victimology, it is the study of available victim information for the purposes of assessing their risk of becoming the victim of a particular type of crime. He states that there are two kinds of victim risk to assess: "lifestyle risk" and "incident risk". "Lifestyle risk" is a term that refers to the overall risk present by virtue of an individual's personality and his or her personal, professional, and social environments. "Incident risk" is a more specific term that refers to the risk present at the moment the POI initially acquires a victim,

by virtue of the victim's state of mind and the hazards of the immediate environment (Burgess & Hazelwood, 1995; Turvey, 2002).

Each type of victim risk may be generally characterised in one of three ways: low, medium, or high. The term "low-risk victim" refers to an individual whose personal, professional, and social life (lifestyle risk) does *not* normally expose him or her to a possibility of suffering harm or loss. The term "medium-risk victim" refers to an individual whose lifestyle risk *can* expose him or her to a possibility of suffering harm or loss. The term "high-risk victim" refers to an individual whose lifestyle risk *continuously* exposes him or her to the danger of suffering harm or loss (Burgess & Hazelwood, 1995; Turvey, 2002).

Victimology is essential to profilers for many reasons. First, profiling the victim assists the profiler offering "proactive techniques" to draw the POI out into the open. In addition, victimology enables profilers to advise investigators as to which interrogation tactics to use when talking with the apprehended suspect. Victimology also aids in recognising the 'type' of victim the POI will choose in the future; therefore assisting in preventative policing strategies, such as the issue of appropriate warnings to the public. To begin, by assessing the type of victim the POI prefers, profilers can suggest proactive techniques to bring the POI out into the open. For example, Turvey (2006) explains the advantages of knowing the POI's victim choice, which is very significant to the investigation as it is possible that the investigator will be able to establish where, when and how the POI chooses and victimises their target. Profilers use knowledge of the victim to locate the common

denominator(s) among the victims. This not only enables them to narrow the possible POI type, but also to alert law enforcement as to the types of people to warn (via media coverage) or direct to specific 'groups' such as: sex workers, nurses or bar staff.

Criminal profiling is a term, which covers a range of methods used to develop advice for investigators. It is based both upon systematic studies of behaviour exhibited during the commission of a crime and on the more particular technique of drawing out inferences about a POI from the circumstances of the offences. The underlying principle of profiling is the inference of POI characteristics from offence characteristics. McCann (1992) provides the following definition:

> Criminal personality profiling is the process of analysing various aspects of violent crime to derive a set of hypotheses about characteristics of an unknown assailant. The ultimate goal of profiling is to assist in the successful apprehension and conviction of the perpetrator. (p. 475).

The fundamental core of profiling is the extrapolation of characteristics of criminals from information about their crimes as an aid to police investigations. At various times, advocates of profiling have claimed that relevant information can be used to help investigators identify the probable sex and age of a perpetrator, as well as the ethnic background, relative social status, marital status, educational level, occupational category, possible criminal history background, and potential for continued offending (Ault & Reese 1980, Tetem 1989). Some have suggested that the very process of searching for the materials necessary to construct a profile often in

itself brings to light previously overlooked investigative leads. Such claims notwithstanding, it is helpful to view criminal profiling as one of many analytical tools that can be used in an investigation.

The huge publicity generated by its application to a few very well publicised cases has tended to result in criminal profiling being represented as a panacea for difficult investigations. Criminal profiling is not, however, a magical concept which will unequivocally identify the POI. Instead, it can help a senior investigator structure an inquiry and prioritise any list of suspects. In its widest sense, criminal profiling can provide skilled professional advice on interview strategies in relation to both witnesses and suspects, and can assist with management of difficult major investigations – particularly ones which involve kidnap and ransom demands (Stevens, 1997, p. 83).

Despite apparent popularity in the United States and Britain, few Australian researchers have attempted to evaluate criminal profiling as an investigative aid or conceptual tool. Most research, it seems, has focused on assessing the accuracy and validity of specific profiles (Campbell, 1976; Canter, 1993; Devery, 2009; Goodwin, 1978; Jenkins, 1994; Levin & Fox, 1985; Rossmo, 1996; Vorpagel, 1982). Opinion varies on whether profiling is, or can be developed as, a science but mainstream criminology does not appear optimistic: "any review of the relevant literature invites the conclusion that, at best, it is not yet proven as a science" (Editorial: *Criminal Behaviour & Mental Health,* 1997, 13). The current and future status of profiling within Australian law enforcement practice is unclear. There seems to be a conspicuous lack

of empirical examination into the appropriateness of the procedure and the extent to which such techniques can add value to police investigations. In summary, while scope and practice of criminal profiling have not been fully explored in Australia, and there is a lack of acceptance of profiles in Australian courts, profiling in the United States and Britain has often been used to provide assistance to law enforcement investigating violent crime (Canter 1989, Turvey 1999).

Victimology assists in the development of interrogation techniques used by law enforcement when interviewing the POI. While the correlation may not seem evident at first, it is there. The profiler has learned as much about the victim and now knows a great deal about the type of person the POI is. An experienced profiler will know that certain suspects will either feel remorseful or lack remorse by analysis of the behaviours of the POI at the crime scene. The profiler will also know which interview tactics are most likely to yield a confession. With generally a strong grasp on the behaviour of people, they will use knowledge from past cases to guide them in building the picture. Finally, victimology is important to criminal profiling because it enables the profilers to recognise if a specific type of person is at risk through the study of the victim in previous incidents.

Victim Characteristics

Several researchers contend that victim characteristics may impact the likelihood of case clearance, albeit for different reasons. One line of reasoning is that cases involving certain kinds of victim are likely to receive greater attention and effort on the part of police in solving the crime. Extra-legal factors like social class and race are of primary importance here (such as Black, 1980). Other predictions

regarding the association between victim characteristics and homicide clearance are premised on the notion that cases that are more difficult to clear (e.g., felony-related, stranger homicides) are more likely to involve certain types of victims (e.g., males, the elderly).

Serial, stranger homicides display a high prevalence, with US estimates that thousands are murdered due to serial killers, with similar British aggregates of one in thirty offences committed by similar types of persons of interest (Burgess et al., 1986; Holmes & DeBurger, 1985; Jenkins, 1988). Once this type of homicide is identified, investigative tools in the form of multiple typologies are a means to ascertain the psychological traits of the POI, specifically targeting the particulars of motivation (with additional facets), and aiding in capturing the criminal (Arrigo & Purcell, 2001; Burgess et al., 1986; Hickey, 2010; Purcell & Arrigo, 2006). However, such taxonomies either demonstrate discrepancies in their construction (such as the FBI's Organised/Disorganised typology), may measure the wrong paradigm (the Keppel and Walter [1999] Extended Rape Classification) or in their formulation and methodology, be untestable (The Holmes Typology; Bennell, Bloomfield, Emeno, & Musolino, 2013; Canter, 2004; Canter & Wentink, 2004; Douglas, Ressler, Burgess, & Hartman, 1986; Holmes & DeBurger, 1985; Keppel & Walter, 1999; Sewall, Krupp, & Lalumiere, 2013). These categorisations have not accounted for social development and modified potential motives as concepts of psychological dysfunction advance, while their creation exhibits a western bias which may not account for the manifestation of serial murder within other cultural environments (Canter, 2004;

Canter & Wentink, 2004; Douglas et al., 1986; Groth, Burgess & Holmstrom, 1977; Holmes et al., 1988; Keppel & Walter, 1999; Purcell & Arrigo, 2006).

These limitations have created circumstances where the role of psychological profiling within certain nations does not meet the required standards for acceptable evidence of judicial proceedings, while simultaneously discrediting the practice with both legal professionals and academics (Alison, Bennell, Mokros, & Ormerod, 2002; Snook, Cullen, Bennell, Taylor, & Gendreau, 2008; Taroni, 1994). Additionally, the phenomenon of serial murder may become increasingly prevalent, as the socialisation of previously deviant sub-cultures becomes commonplace, specifically in the popularisation of paraphilic activities which have been tentatively linked to its development (Hickey, 2010; Holmes & DeBurger, 1985; Holmes & Holmes, 2010; Myers et al., 2008; Wolfgang, 1968). Therefore, discrepancies within existent typologies and the growing mainstream acceptance of aetiological facets of serial murder prompt the requirement to re-examine and recreate investigative taxonomies, identifying key variables within the psyche of POIs to aid in apprehension and the prevention of potential violence, especially due to the torturous nature in which these may manifest (Purcell & Arrigo, 2006).

The Ideal Victim and the Complicit Victim

Importantly, most people have firmly held stereotypes about who a victim is, gained from media that emphasise particular 'types' of victims deemed to be more newsworthy (Greer, 2007). Stereotypes also come from folklore, fairy tales narrated to children such as Snow White, Cinderella or Little Red Riding Hood, where victims are all female, innocent, fair, and engaged in some respectable activity. And in all

these stories, the POI is evil, strong, and dangerous, the more "ideal" the victim, the more "ideal" the POI (Christie, 1986). Such ideal types are social constructs, as real victims are rarely so one-dimensional, but are characterised by the same complexities and contradictions common to everyone.

Norwegian criminologist Christie (1986) has described the ideal victim as an elderly lady who, while on her way to help her sick sister, is robbed by an adult male drug abuser. An ideal victim has, according to Christie, at least six characteristics:

- The victim is weak
- The victim is involved in a respectable activity
- The victim is en route to a place which is beyond reproach
- The perpetrator is dominant to the victim, and can be described in negative terms
- The perpetrator is unknown to the victim and has no relation to the victim
- The victim has enough influence to assert "victim status".

Importantly, the ideal victim also has its opposite. An example of this type is the drunken young man who is robbed in a seedy bar by those he was associating with. Here we have the possibility to demand moral responsibility; he should not have gone to such a bar, he should not have become intoxicated, he should not have associated with those types. If the exposed individual is not classified as a "victim" despite the existence of psychological, physical or economic damages, then he or she risks receiving less protection, or even no protection, because they are not encompassed by the "standard" view of a crime victim. Christie (1986) is not the only

academic to categorise victims. The following section describes three categories that academia agree upon.

The perception of a crime victim as "innocent and weak" (Christie 1986) is quite oversimplified and in many cases has no relation to reality. In some cases, the categories of crime victim and POI overlap (Anttila, 1974; Fattah, 1992; Hindelang, 1981; SOU, 1990) and they can occasionally both refer to the same individual (Blomqvist et al., 1980; Fattah, 1994; Lenke, 1973; Singer, 1981). In a homicide co-committed with a "drug rip", the victim can also be the POI in another crime (drug dealer). A large percentage of all violent crimes is connected with the consumption of alcohol. This is especially true in cases of violence between individuals unknown to each other, where both victim and perpetrator are often intoxicated (Carlsson Sanz et al., 2000; Dystring et al., 1991, 1993; Häggmark, 1997; Lidberg, 1995). Provocative or intoxicated behaviour by the victim at the time of the crime is not a justification for the occurrence of the crime.

There is a significant overlap between victim and POI populations, particularly amongst young people, and within particular sub-groups, such as the poverty stricken, itinerants, alcoholics and drug addicts. However, when the police arrive at a crime scene, such stereotypes continue to operate, subconsciously guiding the brain to look for certain information that would confirm the hypothesis, and ignoring information that might challenge it, a process termed "confirmation bias" (Nelson, 2010).

An initial hypothesis in a criminal investigation may guide the sort of evidence investigators seek, the leads they pursue or drop, and their interpretations of ambiguous evidence. This bias can lead to false convictions. Certain procedural milestones may cement hypotheses in criminal investigations. Identification and arrest of a prime suspect shift investigators' focus from fact seeking to case building, leading them to pursue evidence consistent with the favoured hypothesis, ignore falsifying evidence, and to discount inconsistent evidence. Confirmation bias may be exaggerated by strong motivation to believe in the initial decision (especially serious or high profile cases), or when a heavy caseload motivates a quick turnaround.

Working hand-in-hand with confirmation bias, "hindsight bias" describes another natural tendency to regard a past event as inevitable, or at least more likely than originally thought, after it is confirmed by later information. Otherwise known as the 'knew-it-all-along' effect, it stems from the way we construct our memories of events (O'Brien, 2009), using all of the information gathered since the original occurrence to arrive at a much more definite causal chain of events than is objectively warranted. Naturally, there is a need to make sense of things that may drive some investigators to reach conclusions too hastily and stick to them too resolutely. Issues related to victims and police confirmation bias can alter the future of possible prosecution, victims' psychological welfare and general health. It can also allow a guilty POI to escape justice (O'Brien, 2009).

Criminal Profiling

In the US, the technique of criminal profiling has led not only to the production of specific profiles, but also to the development of other services such as

personality assessment, investigative strategies, interview strategies, trial strategies and opinions on the various aspects of the victim and suspect. However, suggestions offered by profilers are not solutions. Criminal profiles do not, by themselves, solve crimes. Instead it will be argued within this chapter, profiling should be viewed as simply one more tool that can help guide strategy development, support information management and improve case understanding. Criminal profiling cannot tell police who *actually* committed a particular offence. What a profiler can do is advise on certain attributes which the POI is *likely* to possess. The emphasis there is important; although there have been some celebrated cases where profiles have been very detailed and accurate, in most cases, a profile simply allows police to narrow down the pool of suspects.

There has been a paucity of literature exploring the theory of criminal profiling, and it seems its value as an investigative tool within law enforcement has been a very poor second to popular media and "Hollywood hype". Although some studies exist, they are limited. The aim of this section of the research is to add to this literature by giving a critical account of the scope and practice of criminal profiling generally and critically examining its limitations. The ability of criminal profiling and profilers to help interpret patterns of behaviour will be examined in some depth.

Douglas, Ressler, Burgess, and Hartman (1986) presented criminal profiling as a technique for "identifying the major personality and behavioural characteristics of an individual based upon an analysis of the crimes he or she has committed" (p. 405).

This statement suggests that profiling does not supply the identity of a POI[57], but rather implies the *type of person* most likely to have committed the crime based upon their behaviour at the crime scene and whilst interacting with the victim(s). This process advises investigators and directs them by providing specific information that will assist in predicting possible crime locations in serial cases, narrowing the possible suspects, provide interview strategies (Ainsworth, 2000; Ault & Reese, 1980; Douglas et al., 1986; Holmes & De Burger, 1988; Holmes & Holmes, 1996; Meyer, 2000; Ressler, Burgess, & Douglas, 1988; Turvey, 1998, 2000, 2003) and suggests strategies to increase case linkage to avoid linkage blindness (Egger, 1986).

A literature review concerning homicide POI profiling (Crabbé, Decoene, & Vertommen, 2008) identified two distinct approaches. The first, direct POI profiling, superimposes the POI characteristics over the offence and reviews both, without inferring a causal psychological theory or hypothesis. The second approach, known as indirect POI profiling, theorises that there are fundamental psychological concepts directly related to POI characteristics identifiable within an offence (see Canter 1995, 2000, 2003, 2004; Mulkers 2002[58]). Canter argued that for the process of criminal profiling to be accepted as a scientific tool, as opposed to an art, a theory or model needed to be created that identifies and proves that predictable relationships can be obtained. Therefore, determining themes that will assist practitioners to identify and clarify the relationship between crime-based consistencies and POI characteristics is imperative (Canter, 1995).

[57] Although not all POIs and victims are masculine, this chapter will be describing them as male for practical purposes.
[58] Both approaches assume a relationship between offence and POI characteristics.

At the centre of the scientific approach to criminal profiling homicide events are the principles of POI consistency, where individual variability reflects a transient, within-person change in behavioural performance across the offence which is smaller than inter-individual behaviour discrepancy, and POI specificity, or the way in which an offence is committed, relating to specific circumstances and characteristics (Alison, Bennell, Mokros, & Ormerod, 2002; Canter, 1995, 2000, 2003, 2004; Petee & Jarvis, 2000). When exploring the known literature recognising these premises (Crabbé et al., 2008), the deviant fantasies and psychopathology of the individual POI can explain some offence-POI relationships. Additionally, reliable homicide signature behaviours (Douglas & Munn, 1992a, 1992b; Holmes & Holmes, 1996; Meyer, 2000; Turvey, 1998, 2003) have been found across different events and appear to provide support for the hypothesis that these relationships can be made clearer by the POI's elementary psychological needs.

This supports the theory posited by Holmes and Holmes (1996) who stated that the crime scene reflects the signature, personality and psychopathology of the POI and that their signature and personality will not change. The fact that the type of aggression used, instrumental or expressive (Bushman & Anderson, 2001; Canter, 2000, 2003; Cornell et al., 1996; Salfati, 2000; Salfati & Bateman, 2005) was able to explain victim-POI relationships, concurs with Canter's theory (1994, 1995, 2000, 2003, 2004) which states that the critical difference connecting the scenarios that violent POIs create themselves are variations in the function that they transfer to their victims.

These functions can be categorised in the following typology as:

- An object, something to be used and controlled through restraints and threats, often involving co-committed crimes, such as theft or sexual assault; essential to this is a complete lack of empathy for the victim
- A vehicle to bear the POI's emotional state of anger, frustration or machismo
- A person where there is a perceived level of pseudo-intimacy as the POI attempts to create some sort of relationship with their victim.

Many other authors offer explanation for POI motivation (Ault & Reese, 1980; Douglas & Burgess, 1986; Douglas, Burgess, Burgess, & Ressler, 1992; Hazelwood & Napier, 2004; Holmes & De Burger, 1988; Ressler et al., 1988) with regard to offence-POI relationships illustrating that investigator knowledge of the POI's motivation could possibly provide crucial information in relation to the POI. Moreover, the choice of homicide event location appears to be guided by an identifiable sagacity, endorsing the view that cognitive processes direct offence behaviours (Burgess, Hartman, Ressler, Douglas, & McCormack, 1986; Douglas et al., 1986; Holmes & De Burger, 1988).

In contrast with these proven ideas[59], a number of authors allocated a unique function for the POI's emotions (Ault & Reese, 1980) and character traits (Ault & Reese, 1980; Douglas & Burgess, 1986; Douglas et al., 1986; Hazelwood & Douglas, 1980; Holmes & De Burger, 1988; Holmes & Holmes, 1996; Ressler, Burgess, Douglas, Hartman, & D'Agostino, 1986; Ressler et al., 1988) in explaining offence-POI

[59] An exception is the concept of POI signature, which remains vague and is not proved in the field of investigations (as an example Crabbé et al., 2008).

relationships. Observed data and proof for these fundamental concepts have been less straightforward. Homant and Kennedy (1998) raise the point that there does not appear to be particular personality theory that directs the FBI trained profilers.

This researcher argues that when these profilers refer to the individual characteristics of a POI's personality, they are, in fact, discussing the interpersonal style *and* the fundamental motives of the POI. Furthermore, some investigations indicated specific themes in offence behaviours, such as the organised/disorganised dichotomy, which provided significant differentiation in the emotional state that POIs experienced during the commission of their offence(s). Thus, although no direct evidence has been found for the role of the POI's personality or experienced emotions, there are promising concepts between offence and POI characteristics that should be included in future homicide solvability research.

Critique of the Current POI Profiling Approach

Crabbé et al. (2008) reviewed profiling homicide POIs and provided some defence for the specificity hypotheses, but at the same time, they also demonstrated a number of weaknesses in the current approach. Firstly, there is a distinct lack of a specific theoretical framework enveloping all the different concepts that attempts to explain the relationship between offence and POI characteristics, although different constructs have emerged over time identifying important fundamental concepts (Crabbé et al., 2008).

Secondly, there appears to be some theoretical uncertainty in the established fundamental notions regarding offence and POI characteristics. When considering the different motivational typologies (Crabbé et al., 2008), it appeared that they often

included more than just information relevant to POI motivation; instead, there were extra-legal solvability factors such as type of relationship with the victim (i.e., familial or intimate motivation), external circumstances (i.e., co-committed homicides), or the POI's mental state (i.e., psychotic homicides).

POI profiling depends upon a naïve trait perspective which attributes behaviour to underlying, relatively context-free dispositional traits within the POI that are not directly observable but can be inferred from the crime scene (Alison et al., 2002; Homant & Kennedy, 1998). The organised/disorganised distinction, for instance, places all POIs on an underlying trait (degree of organisation) and infers some offence and POI characteristics based on the position of the POI on this underlying trait. Review of the consistency of organised/disorganised behaviours across offences, however, appeared to be limited or non-existent (Crabbé et at., 2008). It can be argued that this fixed method to POI profiling ignores the role of the circumstances in which the POI finds himself and that the individual POI's behaviour should be explained both in terms of their core psychological processes and the circumstances of the homicide event.

The majority of research in the field of homicide profiling ignores that the bulk of homicide events occur on a continuum building up over time[60] Most researchers make the homicide event the focus of their research, with little to no consideration regarding the different elements that factor into the different stages of the offence, its processes and how these factors influence other variables within and over different stages of the offence continuum.

[60] For an overview of exceptions, see Crabbé et al., 2008.

Finally, most research related to homicide POIs has ignored the individual POI; instead, it focuses on the manifestations of their behaviour at the crime scene[61]. It is argued that including the narrative of the POI could increase the richness of the offence description, its comprehensibility and could add some depth to the profiles rendered by POI profilers in practice.

All profiling in essence has been an attempt to quantify qualitative information. Earlier attempts were based on extensive experience in investigation and interviews with convicted serious and serial POIs. The most obvious example of this is John Douglas and Robert Resseler and the Federal Bureau of Investigation (FBI) model. The second major development emerged in response to critique aimed at the FBI model, started in the UK by Professor David Canter, a forensic psychologist and mathematician. He introduced a more scientifically rigorous statistical model to further quantify relevant variables (solvability factors). Despite these progressive developments and further firming up of the profiling model, I would argue that all of the attempts to include a strong focus on the POI and the crime scene have paid too little attention to the solvability factors relevant to the victim; a weakness that this thesis seeks to address.

That this is so reflects a fundamental truth about fatal violence that shapes police responses. As Collins (2008) has described it, competent violence is hard to do. Most violent acts arise out of "hot" interactions where who survives and who dies is often not easy to anticipate in advance. Such emotional dynamics have consequences

[61] Except for the organised/disorganised distinction, which was based on interviews with the respective POIs (FBI 1992).

for the "solvability" of such cases. As Innes (2003) and Polk (1994) amongst others note, for most homicides there will be witnesses able to inform police about at least some of what has transpired.

Contrary to the archetypal homicide of mass media representations, the reality of police homicide investigations is that most of the time they are focused upon what are effectively "self-solving" cases; that is, the prime suspect either self-identifies or there are witnesses able to provide police with a reliable account of what has transpired (Innes, 2003). The challenge of such cases is not suspect identification or location, but rather the construction of a compelling case to support prosecution (McConville et al., 1991). The activity of investigation is, after all, fundamentally about imposing a narrative order upon what were in actuality violent, complex and chaotic violent interactions.

Methodology

To demonstrate that use of the use of the Applied Victimology Matrix could better inform a homicide investigation or be used as a 'tool' to assist in re-opening unsolved homicide cases thus increasing the chances of police successfully solving them. Forty Briefs of Evidence[62] (BoEs), from 1994-2007[63], were reviewed and these came directly from police hard copy files stored at State Crime Command Homicide Squad. Five solved and five unsolved cases were examined, in the form of (BoEs), for this study. Each de-identified case is presented in the format of a case synopsis

[62] These were not random; instead in order to maintain confidentiality and conformity with ethical requirements cases were specifically chosen which did not incorporate unusual behaviours, wounds or circumstances that could have made them identifiable.

[63] This date range was chosen as this researcher's review process started in 2007, and therefore the records were the most current at that time.

and from each of these BoEs variables where added to the Applied Victimology Matrix, adding to possible victim variables that could be considered to aid in positive clearance is applied in each case.

Definition

Arguably there is a very different dynamic between a killer and their murder victim than there is between victims and POIs of other violent crimes, as homicide is certainly a much higher threshold of criminal behaviour. In the case of a pre-meditated homicide, the motivation is so great that a person is willing to end a life to get what they want. It should be noted that the terms "murder" and "homicide", although often used synonymously, are not.

Murder is a legal term describing a homicide which is criminal, or a homicide that breaks the law. There are various types of murder which differ from jurisdiction to jurisdiction and across time. *Homicide* on the other hand is a clinical term used to describe "the killing of one human being by another" (Dolinak & Matshes, 2005, p. 665). When a medical examiner or forensic pathologist determines that a death is the result of homicide (as opposed to an accident, suicide or natural causes), this does not indicate that a crime has been committed, or that the person committing the homicide should or will be held accountable. It simply means that one person died at the hands of another, as stated by Dolinak and Matshes (2005): "[t]he certification of a death as a homicide is purely a medical diagnosis" (p. 665). This is a very important distinction to make for the purposes of this research, as all the cases involved were homicide cases, however not all were cases where a murder occurred.

Briefs of Evidence

Historically, access to police records, cases and Briefs of Evidence (BoEs) has been highly restricted and granted to those who are:

1. Members of the initial police team in charge of the investigation
2. Police management
3. Department of Public Prosecution.

> Ultimately all research depends on the veracity and efficiency of the police in recording and reporting their information. The greatest service the police can make to scientific research is their co-operation with the social scientist and the maintenance of valid, efficient records of their cases. (Wolfgang, 1967, p. 26).

For a case to be deemed relevant to this study, it needed to have reached the thresholds for inclusion as outlined in Chapter 4. For the most part, the case information available from these sources was detailed and complete. The case details provided were entire case briefs given to these experts during the investigation or discovery. The Briefs generally included: initial and supplemental police reports including witness and suspect statements; evidence logs; crime scene photographs and photograph logs; forensic examination results; autopsy reports; expert reports compiled for either the Defence or the Prosecution; and other related materials depending on the case details.

Although only a small sample was sourced through this process, it should be noted that this researcher was extremely privileged to gain access to these detailed case files from SCC personnel. The Briefs of Evidence (BoEs) were a selection of 40

complete BoEs selected by the Homicide Squad administrative personnel at the direction of the Squad Superintendent. The selection of briefs was determined by restrictions imposed by legal constraints, such as the appeals range timeframe. This is inherent in the sample gathering method, and simply could not be avoided. The case information available with this restricted sample was detailed and complete, allowing for a thorough analysis. Issues such as this sample size and the possibility of false positives will be addressed in the discussion. A sample of these Briefs is provided.

Possible ethical dilemmas could have arisen when the researcher was granted access to study complete BoEs in both solved and unsolved cases. Due to the fact that the researcher gained access to BoEs and closed cases that included private and confidential information about victims, POIs and property information, the researcher was acutely aware of, and adhered strictly to the National Statement on Ethical Conduct in Human Research (2007). Using and complying with both Bond University's[64] and NSW Police institutional policies and procedures allowed easily transparent processes for approval and monitoring.

There was a definite and considerate regard for the welfare, rights, beliefs, and customs protection of individuals within these briefs. Legal obligations were observed when the researcher-received information about others associated with the homicide events. Ethical concerns need to be addressed both in the development and implementation of all research strategies (May, 2001). The research strategy drew

[64] The research strategy was formally submitted to and approved by Bond University Higher Education Research Committee (BUHREC) (Ref: RO652).

upon May's (2001) argument that ethical guidelines must be developed prior to undertaking research that adopts broad flexible parameters, to enable the exercise of discretion in responding to the inevitable unanticipated issues and dilemmas that may emerge.

Supplementary Data

In addition to the three primary categories of data utilised within this research, those being: quantitative data sets, survey results and BoEs, the researcher also drew on a handful of supplementary data sources in different sections of this thesis. First, observation within the NSW SCC Homicide Squad and discussions with the intelligence officers dedicated to the squad. These conversations and observations normally took place in meetings, between meetings or during break times. The researcher accepts that they do not constitute formal 'interviews', however they provided incredibly helpful information that was recorded within field notes. Examples of useful and constructive information gleaned from these experiences included: that detectives frequently had detailed information about the Person of Interest (POI), their motive and, the circumstances leading to the initial incidents, this was particularly true in relation to the unsolved cases reviewed. However, in the majority of those cases, the detectives were unable to use the information to proceed to the Director of Public Prosecutions because, either the witnesses refused to co-operate, there was a lack of forensic evidence or the case had previously been taken to court and the accused had been found not guilty or acquitted with the evidence that the Homicide Squad had provided.

Second, in some instances, when the quantitative data was unavailable to support further investigation of specific, and interesting variables the researcher was able to draw on a rich collection of 'external' (to the NSW Police Force) qualitative data. Those sources of information on specific homicide types was obtained from two on-line sites, namely; the Australasian Legal Information Institute (Austlii) and the Legal Information Access Centre (LIAC). These two databases provided detailed accounts of specific homicide types, case studies and the ability to read complex narratives in court reported discussions. The results of detailed study of 100 narratives provided discussion on very specific factors mentioned within incident details.

Further research in relation to these factors and others, recorded within the Applied Victimology Matrix (Appendix E) where then sort in media databases to see whether they were previously found in other similar type homicides. Although, it is accepted that this method lacks the data to complete an exhaustive and compelling analysis of every potential explanation for the new variables/factors recorded within this thesis, the researcher decided that the various data sources drawn upon, collectively, provided a robust, circumstantial case for the conclusions presented.

Results

Completing an applied victimology can help overcome many of the biases and stereotypes discussed herein, provided that approaches are more than stereotypes themselves. This researcher created the Applied Victimology Matrix (Appendix E) by identifying the solvability factors from the literature, police practice and observation related to this research. When tested against 40 Briefs of Evidence supplied by the

NSW Police SCC Homicide Squad, the matrix identified missing solvability factors in many of the unsolved cases. In some instances, where POIs had been identified in unsolved cases, conviction was not achieved due to lack of admissible evidence or witness accounts.

Sample: Five Solved Homicides

SH001-01SHV1. In early summer late in the 1990s, a family walking along the bank of their local river discovered a Sulo bin washed up on the bank. It had been sealed shut with silicon sealant and hexagonal tech screws and there was a foul odour emanating from it. When police arrived, they discovered the mummified remains of a man, missing his head and hands. The deceased was later identified through publicising a photograph of a forearm tattoo. At the time of discovery, he had been missing from his home in regional NSW for approximately four months. The victim was a male in his mid-thirties who suffered with schizophrenia, but due to the fact that he was coping well on medication, he lived alone. His mother frequently talked with him and visited during the week.

Upon further investigation, the Sulo bin held not only the victim's body, but a major clue in identifying the POI, as the bin's serial number that had been cut away had fallen inside with the body. This serial number literally led police to the POI, whose ex-wife and children lived next door to the victim.

During the period of police investigating the missing person and discovery of the remains, the victim's house was destroyed by fire. Police later discovered that the POI had removed the victim's head and hands as a way of de-identifying the victim,

and burnt them in the house firebox. Later, he committed arson to destroy any forensic evidence potentially left behind in the victim's house.

Once the POI had been identified and interviewed, he was charged. He stated to his treating psychiatrist that he had been sexually abused by his step-father as a child, and that had prompted him to kill the deceased because the POI believed that the victim was sexually promiscuous. The allegation concerning the abuse was corroborated by a sibling whose testimony was accepted by the courts. Contrary evidence was provided by the father of the POI, who stated that he believed his son's motive for killing the victim was jealousy. He believed his son thought that his ex-wife and the victim were intimately involved, and that the victim had been "annoying" the estranged family for some time. The POI had no tolerance for the victim due to his mental illness. He admitted his guilt to police in an interview and provided a signed statement. At court, he was found guilty and sentenced to 22 years for murder and four years for arson. He will be eligible for parole in 2018.

SH007 - 07SHV1. After his first wife died from cancer in the late 1980s, the POI met and befriended the deceased, who was a female native Russian staying in this country on a student visa. They went out socially several times and had sexual intercourse once before the deceased moved in with the POI to his house in the outer Western suburbs of Sydney in August 2002. After a short period, she told him that her visa was due to expire and suggested they marry so that she could obtain permanent residency to become an Australian citizen. They were married on 23 September 2002 in the presence of the POI's sister and brother-in-law; his own

children were not informed of the marriage because the POI believed they would not approve of his choice of wife, since at the time of their marriage, he was 64 years of age and his new wife was 22.

According to the POI, after the wedding everything changed, sexual intercourse ceased and they occupied separate bedrooms. She became very demanding as to her domestic requirements, forced him to drive her to and from her place of employment and accused him of stealing her papers. He in turn accused her of stealing his mail and removing other items from his bedroom. She said she needed to be able to show that she had the resources to finance her proposed university studies, so the POI obtained a substantial loan from one of his children that he believed was to be deposited in a joint account. Instead, she placed it into her newly opened private account. Ongoing disputes over money and personal property ensued. The deceased allegedly obtained money from his bank by forging his signature and she pawned their wedding rings. The POI stated she was known to stay out many nights in a row, was argumentative and emotionally abusive. To avoid confrontation, he locked himself in his room and rarely came out.

Police were called to the premises on two separate occasions prior to the deceased's death for noise and abuse complaints. On both occasions, both parties chose to stay at their residence. On the day of her death, the deceased arrived home in the early hours of the morning and banged on the door to be let in. The POI got up, let her in and returned to his bedroom, where he locked the door and attempted to go back to sleep. The deceased spoke, yelled and kicked at his bedroom door for

about 40 minutes. He then opened the door, shook her by the arms asking her to stop, whereupon she stepped into his bedroom and a scuffle ensued. They physically fought each other and both ended up on the bedroom floor, when the POI put his knee into her stomach and hit her on the head. At this stage, he says the deceased was screaming, and in order to quieten her, he put a cloth over her mouth and held it there. He took her shoe and repeatedly hit her over the head with the heel. Shortly after he stopped, he realised that she was dead.

He had a drink of water, a cigarette and a shower. He then telephoned the local police station and his daughter, and waited at the house until they arrived. The photos of the deceased taken at the scene and at post-mortem revealed multiple and extensive injuries to her head and body. The post-mortem examination found cause of death was blunt trauma to the head and trunk, and asphyxia. An examination of the POI disclosed eight lacerations to his right forearm and a fracture of the fifth finger on his right hand, and he complained of a painful right hand, thus indicating the violence of his attack. He admitted his actions to investigating police and pleaded guilty.

SH009 - 09SHV1. The victim of this incident was in her mid-thirties and a single working mother of a toddler. Her ex-partner, the child's father, had since re-married and moved intrastate. She had been dating a number of men casually, who were not known to each other. At the time of her death, the victim worked as a sales representative, and during the police investigation post her death, they discovered that she was actively engaged in prostitution.

She was living alone with her child but had a domestic partner who spent some nights at her residence. A dispute between the victim and her de facto, the POI, occurred whilst on a family outing when the victim told him that she was seeing someone else. Her new partner was younger and wealthier than the POI and she wanted to break up with the POI to pursue this new relationship.

The POI drove to a secluded area intent on convincing her to stay. The victim would not consider it and they verbally fought for some period of time. The POI then shot the victim in the back of her head whilst she sat in the passenger seat of the vehicle. He dumped her body in bushland. The POI was a middle-aged former Department of Corrective Service's employee and corrupt former federal police officer. The POI was arrested four months after the murder when he attempted to retrieve the victim's remains to dump at sea. He was charged with:

- Murder – Section 18(1)(A), Crimes Act 1900
- Sell Firearm to Person Unauthorised to Possess it – Section 51 (1)(A), Firearms Act, 1996
- Possess more than three unregistered firearms including prohibited firearms – Section 51D (2) – Firearms Act, 1996.

Items seized included 37 firearms (rifles and shotguns), 1 x Walter PPK .32 semi auto pistol and $45 000 in cash. The POI pleaded guilty to manslaughter, not murder, on the grounds of provocation.

SH016 - 16SHV1. Over a period of 18 months, the Department of Community Services (DoCs) received and recorded notifications of suspected physical abuse,

neglect and supervision issues regarding a two-year-old male. He was later found dead in his home, and according to his mother and her de facto, he had suffered a seizure and consequently died. The post-mortem examination recorded cause of death as "severe head injury, with marked brain swelling". Multiple bruises and recent and historic fractures were discovered on the victim's body. The forensic pathologist concluded that the victim had borne long-term abuse and neglect. At the time of the victim's death, his biological father was in prison, the mother's parents lived interstate and there was an infant female (the product of the victim's mother and the POI) who survived the victim living at their residence.

During the first week of the investigation, police narrowed their focus to the de facto male living with the victim's mother. He had a prior criminal history in minor, but violent, assaults and had often stated to his friends and family that he did not like the boy and wished that he was not around so that he and the child's mother could be free of the responsibility. When faced with all of the forensic evidence, the medical examiner's report and witness statements, the POI pleaded guilty and received a nine-year sentence. The child's mother was charged with failing to report the abuse and complicity in the act, but due to a plea and giving evidence against the POI, all charges were withdrawn.

SH019 - 19SHV1. A young male, 23 years old, was killed late at night at his place of work as a result of a gunshot wound to his head. Police intelligence sources relating to the deceased suggested that prior to his death, he had been heavily involved in gang activity, drugs and violent street crime, with a lengthy criminal

history. Although he did not use alcohol, illicit or prescription drugs, it was generally acknowledged among his family and friends that he had a gambling habit. At the time of his death, he was in a steady de-facto relationship. He was a member of a Sydney based, Middle Eastern gang and had a history of being aggressive towards police. In fact, at the time of his death, he was being investigated in relation to the murder of a Police Constable. The weapon was later proved to have been a 9mm calibre firearm. Robbery did not appear to be the motive in this case as Ecstasy, Cannabis and over $1 000 cash were located on the body of the deceased. However, witnesses stated that the victim had spoken of going to purchase two kilograms of cocaine and had been in the possession of $300 000 at the time he was last seen alive, which was not recovered.

Subsequent investigations identified a number of POIs; however, forensic evidence led to the POI who was charged with the offence. This man was found to be in his early thirties, married, and the same ethnicity as the victim. He too had prior criminal convictions, including charges for drugs and armed robbery; he also worked in the same industry as the victim. There was no firearms licence nor registration listed against the POI. The firearm used in the homicide was never recovered. The POI was later convicted of armed robbery, and was serving a six-year sentence at the time that homicide detectives identified him as the POI in this case after lengthy investigations. He was subsequently tried and found guilty of murder, for which he is serving 22 years.

Sample: Five Unsolved Homicides

UH003AQU - 03UHV1AQU. A single white male in his late forties was found beaten to death in a public park. His time of death was listed as between midnight and 7am. He was long-term unemployed as he suffered with an intellectual handicap and schizophrenia. He did not use drugs or alcohol. Police discovered that the victim had been previously assaulted in the same park where he eventually died. Known at local homeless shelters, religious centres and by railway attendants in the area, he was considered a quiet, unassuming man. He did not have a strong bond with his biological family due to his illness. His cause of death was listed as blunt force trauma to head and chest. A POI was identified and was later requested by police to give a statement at a Coronial inquest. Upon receiving legal advice, he declined to answer any questions. This case remains unsolved.

UH006CIT - 06UHV1CIT. A divorced European male in his mid-fifties became the victim of homicide by a firearm. He had been employed as a high school teacher and was survived by two sons. He was murdered near his residence and the weapon used was thought to be a .22 Long Rifle. A casing was found at scene and a bullet located in the victim upon post-mortem examination. The weapon was not located; however, a POI later identified held a licence and registration for this type of firearm. This case remains unsolved.

UH004CAR - 04UHV1CAR. A single white male in his late thirties with a prior criminal history for stealing was found dead with head wounds. At the time of his death, he was gainfully employed as a sales assistant and was not using drugs, although friends noted he drank socially. The medical examiner recorded the

victim's cause of death as asphyxia, due to compression on the neck associated with blunt trauma to face, neck and chest. No POI was listed and this case remains unsolved.

UH008EME - 08UHV1EME. A well-groomed male in his mid-sixties was found deceased in his residence. He was a divorcee survived by his ex-wife and four children and at the time of his death, he was employed as a blue-collar worker and union representative in his industry. He was known to carry large amounts of cash as well as small amounts of cannabis for personal use. He regularly used the services of sex workers both in brothels and in his residence. The victim was known to possess knives at his place of work and a concealed knife within his residence, reportedly to protect himself. His cause of death was recorded as multiple stab wounds to the chest, abdomen and neck; there were 30 wounds identified. The murder weapon was never recovered. No POI was identified in this Brief.

UH009GAR – 09UHV1GAR. A Caucasian female in her late teens, known to police as a heroin addict and sex worker, was found at an inner city derelict premises. The victim was discovered where she died. She had a de facto partner and was employed at the time of her death. The forensic pathologist recorded her cause of death as severe head injuries. Eight separate wounds were discovered at her post-mortem, consistent with being beaten with a length of timber. A pool cue was discovered within the crime scene and was confirmed as one of the murder weapons. Several POIs were listed in this Brief; however, no one had been charged at the time of this study.

Sequence of Acts

The findings identified that there was a distinct pattern of behaviour in relation to how the POI interacted with the victim prior to and during the commission of the homicide. All Briefs followed this pattern.

- Act 1: POI enters the crime scene.
- Act 2: POI confronts the victim.
- Act 3: There is a verbal and physical altercation.
- Act 4: POI makes demands of the victim who does not comply with the demands.
- Act 5: POI responds with increased force and overwhelms the victim.
- Act 6: POI kills the victim.
- Act 7: POI attempts to conceal their role in the crime by altering the scene prior to flight.

The following table illustrates the five most commonly mentioned themes, as answered by the NSW Police Homicide Squad Detectives in the police surveys. It was then that deemed that these variables were the five key factors to solving a homicide. It was important to know these factors, direct from the practitioners, as it is they that use these to solve crimes. From this researcher's perspective, it was imperative to know this list to inform the Applied Victimology matrix.

Table 15
Common Themes Tested Against 40 Briefs of Evidence

Solvability factors	Solved	Unsolved
Witness testimony	19	11
Forensic evidence	17	13
Victim body location	17	17
Victim-offender relationship	20	9

Victim participation in sequence of activities	17	15

This next table lists extra-legal solvability factors that are victim-specific and details what the variables are and the specifics involved. This list and the specifics are the next step in the development of the Applied Victimology matrix.

Table 16
Victim-Specific Extra-Legal Solvability Factors Identified

Factors	Specifics
Lifestyle risk	High risk Medium risk Low risk
Incident risk	High risk Medium risk Low risk
Sexual preference	See Appendix A
Disability	See Appendix B
Culture	There are over 1 000 different cultures listed in the Australian Standard Classification of Cultural and Ethnic Groups (ASCCEG) Australia. The point of inclusion on this list is that there were occasions within the dataset where the culture of the victim was a major contributor to the violent behaviour of the POI.
IQ	Genius: 145 - 159 Gifted: 130 - 144 Above average: 115 - 129 Average: 85 - 114 Below average: 70 – 84
Motivation	See Appendix D
Religion and faith[65]	Anglican Baptist Buddhist Catholic Hindu Islamic Jehovah's Witness Judaic Latter Day Saint

[65] The religions listed here are a sample of the major categories listed in the Australian Bureau of Statistics as faith based churches/temples in Australia.

Lutheran
Pentecostal
Presbyterian and Reformed Churches
Salvation Army
Seventh-day Adventist
Uniting Church
Other Christian
Other non-Christian

Discussion

Homicide investigations are clearly one of the highest priorities for the NSW Police Force. Significant resources are placed into homicide investigations and, depending on the circumstances, homicide investigations and prosecutions may extend many years after the crime was committed. Surprisingly, even those criminals previously convicted of murder can be extremely difficult to track down. In homicide investigations, the homicide squad "owns" the job in NSW for the first 72 hours in an effort to use their experience, knowledge and expertise. The investigators closely investigate the first 48 hours after the homicide occurs and the 24 hours prior to the homicide, due to the fact that most homicides are precipitated by an event that occurs within the last 24 hours of the victim's life. Thus, an effective investigative method is to dissect the last 24 hours of the victim's life and then aggressively investigate leads within the first 48 hours of the commission of the crime.

First, after any crime, it is critical for officers to reach involved parties before they have time to coordinate stories and alibis, in order to prevent collusion. Public records information can be used to verify stories or find inconsistencies within statements and relationships provided by witnesses, suspects, or associates. Second,

if a victim or a suspect has never had contact with a law enforcement agency, then the agency would not have any records in its database. Officers can then turn to public records to obtain the most current information, such as date of birth, address, and driver's licence information. If the suspect is already on the run, officers can turn to public records information to retrieve a comprehensive list of associates and relatives, enabling them to knock on doors, call persons of interest, and generate even more actionable information. Third, the more interviews that take place, the more information is uncovered that can lead to a breakthrough in the investigation.

Immediate family may not know everything about a victim, but associates may be more willing to disclose hidden secrets. If the interviews do not result in strong leads and potential suspects, police officers then focus on the victim. A "victimology" is a complete background investigation on who the victim is, where the victim spent time, and with whom the victim is associated. Public records information is an invaluable tool for generating leads from this process. For example, identifying previous places of employment can enable officers to interview former co-workers. Additionally, a victimology can be augmented by information regarding the types of car registered to the victim, the people with whom the victim worked, and businesses and corporations related to the victim. All of this information and more specific factors lead into the Applied Victimology matrix.

Summary

For this research, reassessment of the victim role resulted in the extra-legal solvability factors tabulated as Appendix Four, which were first identified whilst completing the literature review. They were then discovered recorded (where

applicable) within narratives of COPS dataset or BoEs and subsequently tested using the Applied Victimology matrix. The critical point here is that they are not normally nor frequently recorded within police datasets, nor scientifically tested.

Through the research and examination of the dataset and case files, other possibly significant extra-legal solvability factors were identified, namely truancy, military service, neuropsychological deficits, religious faction, and war/conflict. Further studies need to be conducted on these factors to determine whether they have any weight as solvability factors and can be tested and proven to positively affect a homicide investigation.

Applied Victimology reviews very specific victim-focused extra-legal solvability factors that can be reviewed and investigated to assist in re-opening unsolved cases, enriching an open current case, assisting police in current cases that have co-committed crimes, assisting police focus on unusual features within a crime scene (when police know that something at the crime scene or on the victim is indefinably wrong, out of place; 'not quite right'), and will identify key factors that will ensure that the BoE is solid and "defence proof", to ensure conviction.

Chapter 6: Conclusion and Implications

The results of this study created the Applied Victimology Matrix; it did so by first reviewing previous research, the results of the literature review informed the variables tested in a quantitative categorical regression. Once the variables that were predictive of case solvability were identified the researcher looked to the practitioners, the Detectives of the NSW State Crime Command Homicide Squad who answered a basic survey designed to elicit their views on how a homicide case is solved and what factors they felt were more important to successfully closing a case. Once the results from this chapter were analysed, two diametrically opposed homicide categories, that of children and gangs, were then compared and contrasted in terms of the time taken too solve (in days) based upon their homicide typologies. Finally, Chapter Five reviewed 40 Briefs of Evidence (BoEs), presenting five solved and five unsolved, demonstrating victim-specific factors that could impact police investigation and case outcome.

Solvability factors and homicide clearance rates have been a topic of interest for decades as the general public view clearance rates as the police "report card" and a measure of police effectiveness. From 1994 to 2012, the number of homicides decreased in NSW, while clearance continued at a stable rate of 83%. There is a danger that the stable nature of clearance rates and the current number of unsolved homicides may undermine the public's confidence in police investigators. In saying this though, much of the public judgement comes with very little knowledge of the complex nature of some types of homicide investigations and the protracted process

involved in the charging, arrest and raising of a Brief of Evidence for the police prosecutor to successfully use. His Hon. Michael Kirby, former Justice of the High Court of Australia, has stated:

> The accused doesn't have to prove that he or she is innocent. The prosecution bears the burden from the beginning of the case to the end of the case to prove the accusation against the accused beyond reasonable doubt.

The only way that this can be done is if police provide a 'water-tight' BoE that can be taken to court and proved. Irving Wallach, a Sydney barrister, adds:

> ...and real injustices to be done. I mean, we all see about cases and read about cases where people are locked up in court for such a long period of time – you know, unjustly. Well, one of the huge reasons, one of the big reasons for it is where you don't get proper police investigations and court processes get sloppy[66].

With Australian national data illustrating that 12% of all homicides remain unsolved (Chan & Payne, 2013), friends and relatives of these victims wonder what police have done wrong, leaving them dissatisfied and demanding better police performance, without the knowledge of the reality of the broad spectrum of homicide types. Homicide typologies have a large impact on solvability; for example, if the event is categorised as a "stranger-homicide", being that there are no witnesses, there is no known motive and little to no forensic evidence available, the case will be innately more difficult to solve. Extant research is compelling in its argument with regards to

[66] Both quotes taken from ABC Radio National, 360 Documentaries, Presenter: Kirsti Melville, Producer: Amarande Chauvet; Sunday 15 June 2014 10:05AM.

many cleared homicides being comparatively easy to solve and clear in which there is 1% inspiration and 99% perspiration. However, the relationship between the police process and clearing a case is not well recognised and frequently dependent upon a range of variables. Fundamentally, the impact of various aspects of the investigation, both as individual factors and in combination with each other, remains problematic to measure and evaluate in relation to clearing homicides cases with successful prosecution. Furthermore, there is a lack of current research into homicide investigations, case clearance and solvability factors in Australia, as well as internationally.

Therefore, this thesis contributes to the existing literature on homicide clearance rates and solvability factors by exploring the validity of the significance of extra-legal solvability factors. These factors, which had previously not been taken into account, at least not explicitly, by previous research but which were likely to influence homicide clearance rates, were identified, tested and added into the matrix. The research revealed the complex realities of investigating homicide events in NSW and completed an empirical study that identified specific factors relating to homicide events that could lead to higher clearance rates. It explored and examined the aetiology of homicide in Australia, examined factors that differentiate solved and unsolved homicides in NSW, and reviewed the practitioners' perspective in determining which factors they rated as most important in solving homicide cases.

The findings of this research develop further understanding of three key issues: the complexities of homicide investigations in NSW; the difference in

homicide typologies and therefore the importance of police investigation techniques in relation to the victim using newly identified solvability factors; and new victim-oriented extra-legal solvability factors that should assist police in clearing more homicide cases. Importantly, the concept of Applied Victimology was introduced. The intention of the Applied Victimology matrix is to broaden the way investigators view the victim in relation to the crime scene, forensics and new extra-legal solvability factors, providing additional information in regards to what happened to whom, where, when, how and why. By gaining access to the investigators and importantly, the cases, this researcher was able to develop the Applied Victimology matrix as a sociologically-based process of identifying the victim in every aspect. These victim-variables create a more complete picture of the interactions leading up to the homicide event. At its core, the Applied Victimology matrix seamlessly reflects existing working practices but at the same time *broadens and deepens* the range of variables taken into account as relevant and useable in increasing the probability of solving and clearing a homicide case, and producing the strongest evidence to achieve a successful prosecution.

Homicide cases, like all other cases, begin with different levels of "solvability" and differ in regard to the probability of an arrest. The reality for police is that *all* homicides *are* solvable; however, some will require an investment of a disproportionate amount of time and effort. It would seem that allocating sufficient resources to these difficult cases as promptly as possible should substantially increase the chances of them being solved remaining cognisant of the reality of

financial and human resources. This requires that there are sufficient resources to allocate for both the straightforward and the more difficult homicides, and for police to relatively quickly identify which category a new incident will fall within. Experience has shown that this is possible; for example, UH021-SV1BOP where police managed to charge the POI 27 years after the disappearance and death of the victim. Police opened this unsolved case in 2008 for the newly constituted Unsolved Homicide Squad and charged the POI after four years of painstaking investigation. This case, and others like it, requires sufficient motivation on the part of both the government, which needs to provide appropriate funding, and the police, to devote the resources, to clear cases.

Complicating homicide clearances further are the definitions and metrics used to measure police process. Following the NSW SCC Homicide Squad definition, a criminal case is considered cleared when an arrest for that incident is made. This research has described a myriad of circumstances that indicate variation in clearance; for example, providing for cases where the homicide is cleared due to the death of the POI. In other instances, the measurement of clearance has also accounted for those cases that, although cleared, do not require very much true investigative effort, such as "smoking gun" child domestic homicides where the POI is known or present at the scene, allowing clearance of the case in a relatively short period of time.

By changing the approach and conceptualisation of the clearance dependent variable, from the dichotomy of success or failure to a more realistic "time to clear" continuum, police and academic could re-educate the policy makers, politicians,

media and the general public. This action would make a significant difference to how the public perceive police investigations, and importantly inform the victims' loved ones in terms of the effort that police outlay to catch the POI in homicide cases. The critical and fundamental variations between different homicide typologies definitely impact the time it takes to successfully solve a homicide, as found in Chapter 4.

Conceptualising the dependent variable of case clearance to time-to-clearance illustrated the difference in time, not the lack of police skill or investigation. In reality, the majority of victims featured in this thesis were substantially more likely to be killed by someone known to them as opposed to an indiscriminate stranger. Case data in relation to the gang-homicides indicated that many victims had prior involvement in the criminal justice system, so much so that many of them could just have easily been the POI in the same incident. Gang homicides, no matter what gang or who is involved, take much longer to solve than those deaths caused by an intimate or domestic POI. The relationship in these cases between victim and POI is often a distant type of prior relationship, such as a rival gang member or drug dealer.

The homicides of gang members are less likely to be solved – not because of who the victim is, but because of the untrusting relationship between the police and those witnesses that police look to for help in solving such cases. Based upon the investigators' answers in the survey, one of the strongest determinants of crime solvability is the information gathered by first responders and during the preliminary investigation. If witnesses are unwilling to talk to police on the scene or

to investigators who show up later, then no increase in the number of investigators will close these cases.

In recording these findings, it is important to note that the NSW State Crime Homicide Squad must maintain an adequate number of detectives and other personnel to respond to present and future caseload. Police indicated that identifying witnesses or forensic leads through on-scene activities, community involvement and positive participation remained critical to successfully solving any homicide. Nevertheless, future research examining the use and the quality of forensic information in homicide investigations is required to resolve ongoing debate relating to the significance of forensic evidence in clearing homicides.

Future Areas of Application

Future research on the correlates of homicide clearance rates warrants community-related data, or macro-level variables, in order to obtain a more accurate picture of whether extra-legal or evidentiary factors are the most influential determinants of homicide clearance. Furthermore, a mixed methodological study could also provide insight into the intrinsic nature of homicides and possible obstacles that hinder or benefit homicide investigations.

Due to the fact that this thesis focused specifically on the importance of the victim of a homicide, many aspects of the Person of Interest (POI) were not studied. There is scope for further investigation of POI motive in future, since POI motivation informs the risk that a perpetrator is prepared to take to commit the crime and therefore needs to be considered more seriously. Of the known POIs in this research, 56.6% had “no apparent motive” recorded.

One of the most significant lessons that I learnt from this research is that *unsolved does not mean unknown* – from the 20 unsolved briefs of evidence reviewed, the 150 unsolved cases provided by the NHMP, the 628 unsolved cases listed on Eaglei and discussions with Homicide detectives from the NSW Police Homicide Squad at State Crime Command, nearly 85% of the total number listed a main POI. The police named and investigated the POI involved in every case and could not provide a strong enough brief to provide the Department of Public Prosecution.

Although there are differences among homicides and their (current) level of solvability, there is support for the conclusion that the necessary allocation of resources for homicide investigations does increase the probability that cases will be cleared. Identifying and triaging cold cases that have solvability possibilities is critical. Agencies have found that the availability of physical evidence that is conducive to modern technology, of witnesses, and of an identifiable and living suspect are important criteria. In the past, technicians and detectives collected evidence based on the analysis that could be conducted at that time. Therefore, evidence that could be analysed today, and would have been helpful in connecting the suspect to the crime scene or the victim, may not have been collected.

This novel research would not have been possible except for the openness and willingness of the NSW State Crime Command Homicide Squad commanders, both current and previous, who allowed this researcher unprecedented, unfettered access to the investigators and investigations. Although police do not always welcome outside influences, professionals external to them may offer viewpoints that

contribute to positive change. The situation works as a *quid pro quo* where academics working hand-in-hand with the NSW Police Force can be further educated by real-world impost and in turn, give police "new eyes" in relation to their cases or the benefits of having academic veracity. Collaborative efforts might educate, inform and provide both sides with primary insight to improve homicide clearance rates.

In an effort to continuously test and further develop the Applied Victimology matrix, further hypotheses have been considered. In contrast to Jarvis' research (2011), this thesis' data appear to be indicating that over the past decade there has been an increase in the incidence of acquaintance and stranger homicides, as opposed to intimate or domestic homicide events, in New South Wales (NSW Police data, 2013), and one hypothesis could be that this change has directly contributed to the decrease in clearance rates. Given what the gang-related time to clear findings demonstrated, this topic is worthy of further consideration. The Applied Victimology matrix is currently being tested on outstanding coronial cases, serial sexual assaults and being able to bolster BoEs with further knowledge of the victim in both military and civilian jurisdictions. New multiagency, fully funded research is scheduled to commence in November 2015, in relation to victimology, sexual violence and the matrix.

Data analysis throughout found that the key variables, statistically significant, that lead to solvability are those that centre on relationships and circumstances of the murder. Furthermore, the same variables are also significant when considering the time it takes to solve a case. Another area that was considered important was the

collection of evidence from the scene. The reasons why people murder other people have been beaten to death. But only a handful have approached the problem from the position that want the police officer does or does not do has a tremendous impact on the situation and subsequent results and conclusions. Societal changes, technological advancements and the mobile society we live in have all contributed to the issues surround murder and its investigation.

This research addressed issues surrounding the relationship between the victim and offender, the crime scene location, cause of death (weapon choice), witness participation and circumstances under which the homicide took place. It then considered the effect of these variables the ability of investigators to close the case. Stranger homicides were less likely to be solved than those cases where the relationship between victim and offender was known. The results indicate that this is true and supported by extant research. Importantly, in cases where the relationship between POI and victim is unknown or not clear further investment of the victim's life, experiences, uniqueness is key to finding possible links to the POI, this is one area that the applied victim matrix could provide context. Especially in that it takes into account so many of the newly identified extra-legal solvability factors.

Of note there were many times when the relationship was listed as unknown (example Chapter four: child homicide), however the most of the cases were solved. Whereas with those that were classified as stranger homicides (example Chapter four: Gang homicide) however 70% were solved. I hypothesise that the reason for this disparity with the unknown relationship not being identified in the solved cases

can only be attributed to the collection of this information by investigators. Furthermore, if the relationship was not identified at the beginning of the investigation then it was likely to be labelled *initially* as unknown and post the arrest being made the alteration to the records were not made[67]. The link between the victim and POI relationship and the specific circumstances that led to the homicide have been previously documented however the key conclusion to be made here is that if the circumstances, motive and relationships are known investigators have a much better chance at clearing the case.

Despite what critics say, police investigating the victim of a homicide are not blaming the victim for the crime against them, but instead police knowing about the victim is key to solving the crime that caused the victim's death. The police must piece the homicide 'before, during and after' to properly prepare a Brief of Evidence (BoE), to identify the people and the circumstances involved. Crimes that go unsolved reflect poorly on the criminal justice system and indicate an inability of the system to achieve the goal of reducing future crime. When the murders of citizens cannot be solved, the problem of unsolved crimes becomes particularly revealing of the criminal justice system's inability to reduce violent crimes. Researchers have attempted to explain the difficulties of solving homicides by comparing incident variables of cleared and unsolved homicides. Police administrators have implemented cold case units in their efforts to increase clearance rates.

The applied victimology matrix was created based upon proven predictive extra-legal solvability factors, then further developed by identifying new or

[67] At the time that the researcher commenced collecting the data, 2007.

infrequently recorded extra-legal solvability factors, such as: adverse parenting, religious faith and political persuasion. Finally, the feedback from detectives added specific queries to the matrix, such as though related to witnesses and forensic evidence and numerous themes discovered in extant research, such as cultural diversity. The findings provide context for understanding the solvability factors discovered and outline the possible implications for increasing homicide clearance rates in NSW. Whilst this research has identified the differences between solved and unsolved homicides, the extra-legal solvability factors, combined with the knowledge of the aetiology of homicide in Australia, suggest that there is not just one explanation for these events, and that further victim-focused information used by police for the purposes of solving serious and serial crimes can only be a positive venture for all.

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Appendix A

List of Common Sexual Preferences

- LGBPTTQQIIAA+:

  Any combination of letters attempting to represent all the identities in the queer community, this near-exhaustive one (but not exhaustive) represents Lesbian, Gay, Bisexual, Pansexual, Transgender, Transsexual, Queer, Questioning,

Intersex, Intergender, Asexual, Ally

- Androsexual/Androphilic:

  Attracted to males, men, and/or masculinity

- Asexual:

  A person who generally does not experience sexual attraction (or very little) to any group of people

- Bigender:

  A person who fluctuates between traditionally "woman" and "man" gender-based behaviour and identities, identifying with both genders (and sometimes a third gender)

- Binary Gender:

  A traditional and outdated view of gender, limiting possibilities to "man" and "woman"

- Binary Sex:

  A traditional and outdated view of sex, limiting possibilities to "female" or "male"

- Bisexual:

  A person who experiences sexual, romantic, physical, and/or spiritual attraction to people of their own gender as well as another gender; *often confused for and used in place of "pansexual"*

- Cisgender:

  A description for a person whose gender identity, gender expression, and biological sex all align (e.g., man, masculine, and male)

- FTM/MTF:

  A person who has undergone medical treatments to change their biological sex (Female to Male, or Male to Female), oftentimes to align it with their gender identity; *often confused with "trans-man"/"trans-woman"*

- Gay:

  A term used to describe a man who is attracted to men, but often used and embraced by women to describe their same-sex relationships as well

- Genderless:

  A person who does not identify with any gender

- Genderqueer:

  (1) a blanket term used to describe people whose gender falls outside of the gender binary

  (2) a person who identifies as both a man and a woman, or as neither a man nor a woman; *often used in exchange with "transgender"*

- Hermaphrodite:

  An outdated medical term used to describe someone who is intersex; not used currently as it is considered to be medically stigmatizing, and also misleading as it means a person who is 100% male *and* female, a biological impossibility for humans

- Heterosexism:

  Behaviour that grants preferential treatment to heterosexual people, reinforces the idea that heterosexuality is somehow better or more "right" than queerness,

or ignores/does not address queerness as existing

- Homophobia:

  Fear, anger, intolerance, resentment, or discomfort with queer people, often focused inwardly as one begins to question their own sexuality

- Homosexual:

  A medical definition for a person who is attracted to someone of the same gender (i.e., biological sex) as themselves, this is considered an offensive/stigmatizing term by many members of the queer community; *often used incorrectly in place of "lesbian" or "gay"*

- Hypersex(ual/-ity):

  A sexual attraction with intensity bordering on insatiability or addiction; recently dismissed as a non-medical condition by the American Psychiatric Association when it was proposed to be included in the Diagnostic and Statistical Manual of Mental Disorders version 5.

- Intersex:

  A person with a set of sexual anatomy that does not fit within the labels of female or male (e.g., 47,XXY phenotype, uterus, and penis)

- Male:

  A person with a specific set of sexual anatomy (e.g.,46,XY phenotype, penis, testis, higher levels of testosterone, coarse body hair, facial hair) pursuant to this label

- Pansexual:

  A person who experiences sexual, romantic, physical, and/or spiritual attraction

for members of all gender identities/expressions

- Skoliosexual:

  Attracted to genderqueer and transsexual people and expressions (people who are not identified as cisgender)

- Third Gender:

  (1) A person who does not identify with the traditional genders of "man" or "woman," but identifies with another gender;

  (2) The gender category available in societies that recognise three or more genders

- Transgender:

  A blanket-term used to describe all people who are not cisgender; *occasionally used as "transgendered" but the "ed" can be misleading, as it implies something happened to the person to make them transgender, which is not the case*

- Transitioning:

  A term used to describe the process of moving from one sex/gender to another; sometimes this is done by hormone or surgical treatments

- Transsexual:

  A person whose gender identity is the binary opposite of their biological sex, who may undergo medical treatments to change their biological sex, oftentimes to align it with their gender identity, or they may live their lives as the opposite sex; *often confused with "trans-man"/"trans-woman"*

- Transvestite:

  A person who dresses as the binary opposite gender expression ("cross-dresses") for any one of many reasons including relaxation, fun, and sexual gratification;

often called a "cross-dresser," and often confused with "transsexual".

Appendix B

Disability Definitions

Disability and chronic illness include spinal injuries, Down syndrome, cerebral palsy, Asperger's syndrome, acquired brain injury, Type 2 diabetes and multiple sclerosis.

Acquired brain injury

The effects of an acquired brain injury can be minor, occurring over a short period of time, or can be severe and lifelong. This may be caused by accidents, stroke, lack of oxygen and degenerative neurological disease

Autism spectrum disorder

Lifelong developmental disability characterised by marked difficulties in social interaction, impaired communication, restricted and repetitive interests and behaviours and sensory sensitivities

Developmental delay

Occurs if a child develops at a slower pace when compared to other children of the same age. Indicators might be how they move, communicate, learn, understand or interact with other children

Intellectual disability

The term “intellectual disability” refers to a group of conditions caused by various genetic disorders and infections. These conditions result in a limitation or slowness in an individual's general ability to learn and difficulties in communicating and

retaining information. As with all disability groups, there are many types of intellectual disability with varying degrees of severity

Physical disability

A number of conditions, some of which are permanent, others of a temporary or intermittent nature, may impair physical activity and mobility. These conditions include cerebral palsy, arthritis, muscular dystrophy, multiple sclerosis (MS), Parkinson's disease and repetitive strain injury (RSI)

Psychiatric disability

May be transitory or of longer standing, with symptoms ranging from mild and episodic to severe and ongoing. There are wide ranges of psychiatric disabilities and these can impair a person's functioning in normal social activities. Conditions of a psychiatric nature could include schizophrenia, stress, psychosis and depression

Sensory disability

Affect how people interact with the world around them, the most common being hearing loss, vision impairment or speech impairment.

Appendix C

Interview/Survey Questions for NSW State Crime Command

Homicide Squad

1. With regards to homicide solvability, what do you consider the main obstacles to be in achieving a result and why?
2. Rank the following items in order of importance (1 highest – 7 least) that assist you in solving a homicide.
3. What are the three most important aspects at a crime scene that enable you to solve the homicide?
4. Rank the following items in order of importance (1 highest – 7 least) regarding the internal police organisational features that you consider to be important in the process of solving a homicide?
5. What could be done specifically by detective units or police departments to improve homicide clearance rates?
6. What role does the public play in solving homicides?
7. What role can technology play or should technology play in helping solve homicides?
8. What role does 'time' play in solving homicides (i.e., time it takes to be reported, magical '48 hour rule' to develop initial leads, etc.)?
9. How long does it take to identify an initial homicide suspect on 'average'?
10. How much of a gap is there between the pre-legal basis of suspicion and the legal case that establishes proof?

11. What information about the victim is obtained?

12. In your opinion why do some homicides remain unsolved?

Appendix D

Motive Classifications

Author	Specifics
Bijleveld & Smit (2006)	▪ Criminal contract killing; criminal drug related; criminal other; sexual; robbery; disputes inmates; disputes acquaintances, disputes strangers; other; psychotic; unknown
Douglas et al. (1992)	▪ Criminal enterprise; personal cause; sexual; group cause every type of motivation is divided into subcategories
Holmes & De Burger (1988)	▪ Visionary ▪ Homicides are committed in response to voices or visions that demand that a person or category of persons be destroyed ▪ Mission oriented ▪ Conscious goal of eliminating a particular group or category of people ▪ Hedonistic thrill seeking ▪ Derives pleasure directly from the murder event ▪ Comfort ▪ Instrumental homicides in meeting the killer's goal of pleasure, creating comfort, the good life ▪ Lust ▪ Sexual arousal and gratification are integral to the homicidal act ▪ Power-control oriented ▪ Derives profound satisfaction from the process of having complete life-or-death control over his victim
Keppel & Walter (1999)	▪ Power assertive ▪ Increasing aggression with the victim ensures control and power ▪ Power reassurance ▪ Acts out fantasy and seeks reassurance from the victim ▪ Anger-retaliation

Author	Specifics
	▪ Seeks revenge for his anger towards another person by attacking a symbolic person ▪ Anger-excitation ▪ Engages in prolonged torture, exploitation, and/or mutilation, which energises the killer's fantasy
Levin & Fox (1996)	▪ Revenge (individual, category specific or nonspecific); love; profit; terror
Schmidt et al. (2005)	▪ Concealment of prior homicide; greed; domestic argument; revenge; family honor; jealousy; sexual motives; other
Tita & Griffiths (2005)	▪ Gang; drug; felony; argument; familial/domestic
Turvey (2003)	▪ Power reassurance or compensatory ▪ The offense is restorative of the offender's doubts about himself, his fear of personal inadequacy ▪ Power assertive or entitlement ▪ The offender wishes to appear to have absolutely no doubt about his own adequacy and masculinity, he may be using his attacks as an expression of his own virility ▪ Anger retaliatory or displaced ▪ The offender is acting on the basis of cumulative real or imagined wrongs; the victim may be one of the people who did him wrong or may symbolise that person to the offender ▪ Sadistic or anger excitation ▪ Motivated by intense, individually varying fantasies that involve inflicting brutal levels of pain on the victim, solely for offender sexual pleasure ▪ Profit or material gain ▪ Motivation oriented toward material or personal gain

Appendix E

McKinley's Applied Victimology Matrix

This matrix is intended to be a guide and not a substitute for critical thinking.

- ☐ Observe the evidence of events and related clues
- ☐ Determine what might be learned of events from each observation
- ☐ Consider what the clue or observation means in light of the crime
- ☐ Propose alternative explanations for events
- ☐ Eliminate alternatives with analytical logic, critical thinking and experimentation
- ☐ Sequence the events
- ☐ Observe, challenge and test the evidentiary threshold
- ☐ Establish the nature of the victim-offender relationship
- ☐ Determine where the danger was coming from

Critical Thinking

- Review – Information
- Assess – data
- Goals/Purpose – the "WHY"
- Issues/Problem – formulated
- Data/Evidence – interpretation
- Reasoning – developed and presented

Was the victim's death deemed suspicious in first instance?

☐ Yes ☐ No ☐ Unsure

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Crime Scene		All factors contained within the section of 'crime scene' within the Applied Victimology Matrix where found significant or produced as best-practice in the following texts[68]	
Factual information. What happened; Time: Place: Circumstances surrounding the incident?			
Is there a Person of Interest (POI) identified?			
At what stage was the deceased discovered? Algor mortis (blood circulation stops) Livor mortis (body cools down) Rigor mortis (Body becomes rigid)			
Check the premises			
Check the rubbish bins within and external to the crime scene			

[68] Gardner, R.M., (2012) Practical Crime Scene Processing and Investigation. 2nd Edition. CRC Press, Boca Raton.
Geberth; Vernon J., (2006) Practical Homicide Investigation, CRC Press; 4 edition. New York
Salfati, C.G., & DuPont, F., (2006) Canadian Homicide: An Investigation of Crime Scene Actions. Homicide Studies 10 (2) pp 118-139
Shaler, R.C., (2012) Crime Scene Forensics: a scientific method approach. CRC Press. Boca Raton.

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Are all vehicles at the scene accounted for?			
Are there any distinct odours present (other than decomposition)? If so, what? And what is the source?			
Check the lighting. Are all lights within the crime scene and external to it functioning?			
Check the doors, windows and walls for damage, trace evidence or evidence of tampering.			
Medical Examination Queries			
Hair. Are injuries concealed by hair?			
Has hair been torn off?			
Are there any 'foreign substances' present on or near the victim? Within the crime scene?			
Check for bleeding in the ears.			
Is DNA relevant to this case, record and discuss			
Check for conjunctival bleeding			
Check whether there are any foreign objects in the oral cavity.			
Examine the neck for skin scrapings, red spots and strangulation marks.			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Examine the arms for bruises caused by gripping and resistance.			
Check for marks made by syringes, especially in the crook of the arm.			
Examine wrists for old or new cuts.			
Examine the hands and under the nails for injuries due to resistance and for swellings, hairs and skin fragments.			
Examine legs and feet. Any blood on the soles of the feet?			
Any marks or injuries indicating that the body was dragged?			
Pay attention to creases, damage, bullet-holes, blood spatter, dirt, position on the body etc.			
Examine the pockets. Make a list of the contents.			
Describe the presence of blood and any other stains on the clothing.		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 386 (second last para).	
Was this homicide preceded by a kidnapping or abduction? Accurate description of the kidnapped person? Accurate description of all circumstances around the abduction?			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Collection of dental records, x-ray pictures? Collection of medical records, x-ray pictures? Seizure of DNA-carrying items (toothbrush, safety razor, combs)? Fingerprints? Comparison samples from relatives (preferably mother)? Photos?			
Secured CCTV footages?			
Interviews with ambulance staff or other people bringing the body from the scene (if victim was alive did he say something?).			
Interview of people present at the scene?			
If victim alive at hospital and under treatment, presence of investigator?			
Other incidents believed to be connected to the case at hand?			
How did the family of the victim react or treat you, in your initial meeting?			
Are any of the following motive categories obvious at the crime scene or upon the victim (via cause of death)? ☐ Bias crime (hate) ☐ Class Conflict ☐ Conspiracy			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
☐ Contract ☐ Depression ☐ Elimination ☐ Dissatisfaction ☐ Greed ☐ Infamy/Celebrity ☐ Jealousy ☐ Love (parental) ☐ Financial Gain ☐ Honour/Shame ☐ Narcotics ☐ Mission ☐ Obsession ☐ Personal Vendetta ☐ Political ☐ Property Dispute ☐ Rage ☐ Revenge ☐ Sex/Passion ☐ Thrill of the act ☐ To keep a secret ☐ Urge to Protect			
Are there any items missing from the scene not traditionally considered to be of value to a stranger?			Who might these items have intrinsic worth to?
Are there 'signs' of a relationship between the			E.g. Evidentiary: Wine

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
victim and the POI?			glasses; condoms Extra-legal: rage, lust, jealousy
Are there any items remaining at the scene that would be valuable to a stranger?			E.g. money in plain sight
Are there signs of humiliation in the crime scene (victim posed, naked)?			
Are valuables missing from the scene of the crime or from the victim?			E.g. wedding ring, framed photos
Determine the victim's involvement in the crime by virtue of documenting transfer evidence (blood, fingerprints, broken glass, dropped items, etc.) and negative transfer (the absence of footwear impressions in mud outside a window, the absence of any signs of forced entry, etc.).		Ferguson (2013)	
Does the body indicate that it has been moved or repositioned at the scene?		Pettler, L. G. (2016). *Crime scene staging dynamics in homicide cases.* Boca Raton, FL: CRC Press. - see page 262 'position of the victim's body in the crime scene'. .	This could be indicated by inconsistencies in lividity or rigor mortis and the current positioning of the deceased; in gaps in bloodstains or the presence of blood where it would not be expected; unusual grasping of a

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			weapon; drag marks; evidence that the body has been carried; and so on.
Douglas and Munn (1992; p.757) note two main sources of information are the victim and crime scene. Are there any observable inconsistencies between: Immediate location Distant location			Does the crime scene, or the victim, exhibited signs of an organised or disorganised attacker?
Evidence of drag trails and drag stains on the ground and against environmental surfaces (i.e., bunched carpet, heels dragged across mud, bloodstains leading in from another room, etc.)			
Has the clothing been removed from the victim or the scene?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter. Other chapters potentially useful too (check index). Partially .	What purpose may this have served?
Have the victim's pockets been searched?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter. Other chapters potentially useful	Are the pockets pulled out even partway?

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		too (check index). Partially .	
If incident involved a firearm was the victim a registered owner of the firearm utilised with the event?			☐ Yes ☐ No If yes, details -
If the entry and exit points are unknown, it is possible that a door was left unlocked, or the Person of Interest (POI) was let into the scene voluntarily? Is this feasible knowing the victim?			
If this crime scene shows signs of burglary/theft – what was taken?			Are they 'appropriate' considering? E.g.: was a television stolen or was a framed picture taken.
Is the house ransacked?			Was anything taken? Were ransacked items looked through or simply dumped?
Is the location of a weapon in the crime scene consistent with where it would be expected to fall given the injuries to the deceased?			
Is the victim's clothing positioned correctly on		Pettler, L. G. (2016). *Crime scene staging*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
their body had they naturally moved into that position?		*dynamics in homicide cases.* Boca Raton, FL: CRC Press. - see page 262 'position of the victim's body in the crime scene'. .	
Is the weapon found with the victim the one that caused the injury?		Ferguson (2013)	if not, what was its purpose at the scene? Was there another weapon found at the scene? Does it have a known purpose?
Is the weapon used in the homicide present at the scene?			If not, is there a legitimate reason for its removal?
Is there a weapon at the scene that did not inflict injuries on victim?			How did it come to be there and for what purpose?
Is there any evidence of a verbal or physical confrontation between the victim and offender?			This might include witness statements evidencing shouting or arguing, door slamming, overturned furniture, broken belongings, and so on.
Is there any evidence that the scene has been cleaned up, tidied or that evidence has been destroyed?			This might be indicated by the smell of cleaning products; by an inconsistency between witness reports or wounds

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			indicating a physical fight yet no evidence at the scene; bloodstains missing where they would be expected; recent renovating; missing clothing, bedding, carpeting; and so on.
Is there evidence of any of the following on or around the victim? restraint, gag, blindfold – (blindfold can be used less to control but to terrify) Brutal and prolonged pain over long period of time evidenced through injuries Fetishes – items removed/stolen from victim – shoes, earrings, underwear Partialism - body parts mutilated (Partialism is sexual interest with an exclusive focus on a specific part of the body other than the genitals) Paraphelias – examples are: necrophilia (sexual interest in a corpse), mysophelia (a pathological sexual interest requiring dirt and filth to be involved), paedophilia (sexual attraction to children).		Association, American Psychiatric (2013). Diagnostic and Statistical Manual of Mental Disorders American Psychiatric Association - 5th edition. (5th ed.). Arlington: American Psychiatric Publishing. pp. 700–701. ISBN 978-0890425558.	Are you going to explain these? E.g. in an info sheet?
Is there evidence of any other scene or location on the victim?		Chisum, W. J., & Turvey, B. E. (2011). *Crime*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		reconstruction (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	
Is there evidence of how this victim was approached (blitzed, stalked, coerced, or cajoled)?		*Stalking:* Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see page 251 'stalking'.	
Is there evidence of the victim on the weapon (such as bloodstains)? Are these consistent with its positioning?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	
Is there evidence of the weapon on the victim (such as a lack of bloodstains where the weapon was positioned; gun shot residue; powder burns)?		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See Chapter 5: Detecting staged crime scenes: An empirically derived 'how to'	Are these consistent with its positioning?
Is there evidence of whether this crime was a random or targeted act? ☐ Random ☐ Targeted		Brandl, S. G. (2014). *Criminal investigation.* Thousand Oaks, CA: SAGE. See page 232. Turvey, B. E. (2004). *Criminal profiling: An*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		introduction to behavioral evidence analysis (2nd ed.). San Diego, CA: Elsevier. - See Chapter 12: Organised vs. disorganised - A false dichotomy.	
Is there evidence that the crime scene was 'staged'?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter. Other chapters potentially useful too (check index). Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See Chapter 5: Detecting staged crime scenes: An empirically derived 'how to'.	☐ Yes ☐ No If yes, details -
Is there evidence that this crime was a Planned or an Unplanned Event?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	☐ Planned ☐ Unplanned
Livor mortis inconsistent with the final resting position of the body?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA:	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	
Blood evidence in places there should not be any?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	
Rigor mortis inconsistent with the final resting position of the body?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See 'Use of Crime Reconstruction to Determine Staging' chapter.	
Signs of a struggle?		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press - see page 383. .	
If the initial contact scene was inside a building, how did the POI gain entry? Forced entry Building was open to the public Let in by a third person the POI worked/lived in the building Let in by the victim		*Staging entry point:* Brandl, S. G. (2014). *Criminal investigation.* Thousand Oaks, CA: SAGE. See page 236. Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. - See page 221.	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
through an insecure window used a key		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing - See page 95 ('Point of Entry/Point of Exit').	
Trace evidence on the body from locations un-associated with the crime scene		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing - See page 95. Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. - See page 226.	
Type of Violence Employed 69 ☐ Expressive violence ☐ Instrumental violence		Adjorlolo, S., & Chan, H. C. (2015). The nature of instrumentality and expressiveness of homicide crime scene behaviors: A review. *Trauma, Violence, & Abuse.* Salfati & Canter (1999) Salfati (2001) Salfati & Grey (2002)	

69 Expressive violence: acts that vent rage, anger, or frustration

Instrumental violence: acts designed to improve the financial or social position of the criminal

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Victim familiarity with location, this informs the risk that they are prepared to go to			Travel last night known route taken by victim at the time they took it Look for witnesses and security cameras along the way
Victim incapacitation at the time of initial contact, were they intoxicated, under the influence of drugs, mentally ill, aged or extremely young		Karch, S. B. (2010). *Drug abuse handbook*. Boca Raton, FL: CRC Press. - pg 866 - see 'homicides' under 'the role of toxicology in death investigations'. . See other alcohol/drug sections.	
Was the victim naked at time of discovery?		☐	If yes, consider the following; ☐ The POI attempt to get rid of forensic evidence by removing the victim's clothes and disposing of them ☐ That the homicide was sexual in nature and the victim's clothes were removed

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			☐ The homicide crime scene has been 'staged' to look like a sexual crime, therefore the POI has removed the victim's clothes to mimic this The victim was naked due to have been in the shower, in bed or other prior to the offence
Was there anyone who might have been expected to discover the victim who did not, including spouses, family members, and so on?		Pettler, L. G. (2016). *Crime scene staging dynamics in homicide cases.* Boca Raton, FL: CRC Press. - see page 257 'victim discovery and notification'. Also see Ferguson (2011, 2014), and Schlesinger et al. (2012) as mentioned in Pettler.	
Was the confrontation consistent with how the scene presents?		See all books/studies above on staging.	For example, in a suicide one might not expect to hear screaming and fighting immediately prior to a fatal

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			self-inflicted gunshot wound.
Was this crime committed in the course of another event		*Clearance of homicides that occur during the course of another crime:* See all refs in lit review.	☐ Yes ☐ No If yes, which one?
Were any of the victim's personal items taken by the POI as 'souvenirs'? (Such as: their Driver's license, lingerie, jewellery or hair)		Savino, J. O., & Turvey, B. E. (2005). *Rape investigation handbook.* Burlington, MA: Elsevier. See page 419 (personal items). Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. - See pages 219-220.	
Were there any factors that you have not categorised/unable to categorise?		-	☐ Yes ☐ No
What is the incident risk?		Victim Risk Analysis / Threat Assessment Research Paper for CrJu 4430 Victimology Dr. Stan Crowder Savino, J. O., & Turvey, B. E. (2005). *Rape investigation handbook.* Burlington, MA: Elsevier. See page 223 (victim incident risk).	What was the risk present at the moment of victim and offender were linked together? What was the victim's state of mind and what environmental hazards contributed to the scene?

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
What is the likely method of attack? Mainly verbal Threat of weapon, but often without having one, and any use of weapon will be one of opportunity Stranger attack; unplanned and emotional Rehearses, possibly with compliant victim Bondage usage; bizarre ritualistic quality Records attack – videos, photographs, journals (signs that this has occurred at scene are evidence that offender has stolen a camera, video recorder or tripod) Souvenirs of types – panties, jewellery Opportunistic in victim selection Authority positions; easily trusted Plans all details (con, pick-up, attack in comfort zone, disposal) Victim type – vulnerable, seducible, nonaggressive, low self-esteem Special instruments used to attack		'Rapist Types and Methods of Avoidance': http://faculty.csbsju.edu/uspp/crimpsych/CPSG-5.htm Also found mention of the 7-15 day cycle in Nash, M. (2006). *Public protection and the criminal justice system*. Page 36 specifically	
What type of security is there at the location where the deceased was found and killed (if different)? How did the POI access the victim and the site?		-	
What was the victim doing at the time of the attack?		-	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Consider if the acquisition of victim by POI was dependent on some routine or schedule		Andresen, M. A. *The criminal act: The role and influence of routine activity theory*. See page 24. .	
Whether victim exposure was high or low based on route			Exposure versus risk (Exposure is defined by the degree in which harmful elements are present and protection is unavailable)
Who discovered the victim?		Pettler, L. G. (2016). *Crime scene staging dynamics in homicide cases.* Boca Raton, FL: CRC Press. - see page 257 'victim discovery and notification'. Also see Ferguson (2011, 2014), and Schlesinger et al. (2012) as mentioned in Pettler.	What is their relationship to the victim? Were they going about legitimate business at the time of the discovery?
Did the victim own or have in their possession items such as tablet computers, laptops, mobile phones, or other 'smart' IT products?		Mobile phones and victims: DiBiase, T. A. (2015). *No-body homicide cases: A practical guide to investigating, prosecuting, and winning cases when the victim is missing.* Boca Raton, FL: CRC Press. - see page 7. Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime,*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		criminals, and victims.. Waltham, MA: Anderson Publishing. - See p. 75 ('technological history').	
Would the offender have had to know the victim in order to know that items existed, such as large amounts of cash in a hidden safe?			
Determine if the particular area is the primary crime scene or is it just the finding place and the crime happened in some other place? If so, identify and secure the primary crime scene.		Potter, D., & Kinnee, K. B. (2015). *Preliminary criminal investigations: Solving crimes in a contemporary society*. LawTech.	
Are there any other incidents, occurrences, circumstances or observations that could be connected with the crime?			
Is there anything missing from the crime scene or from the victim?		Fisher et al. (2014). *Crime scene investigation* (3rd ed.). New York, NY: Routledge - See pp. 49-50.	
Is there any information on vehicles used?			
Did the perpetrator leave anything behind through which he could be traced?			
What solvability factors were apparent early on?			
How was the scene recorded?		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press - around	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		page 92 (could only see snippet). Osterburg, J. W., & Ward, R. H. (2015). *Criminal investigation: A method for reconstructing the past* (7th ed.). Abingdon, UK: Routledge. - See page 95 onwards. Sutton, R., & Trueman, K. (2009). *Crime scene management: Scene specific methods.* Wiley. See '3.9 Record the Evidence'	
How was the crime discovered?		-	
How was the canvass done?		*Neighborhood canvass:* Potter, D., & Kinnee, K. B. (2015). *Preliminary criminal investigations: Solving crimes in a contemporary society*. LawTech Publishing Group. Pages not numbered but in section towards the back labelled 'Neighborhood Canvas'	
How did you handle onlookers? Were there witnesses?		*Witnesses:* Brandt, S. G. (2014). *Criminal investigation.* Thousand Oaks, CA: SAGE. - see page 4. *Witnesses:* Mouzos & Muller (2001, p. 5).	
Victim - Hospital Information – working in conjunction with medical staff		Geberth, V. J. (2014). *Practical homicide investigation checklist and field guide* (2nd ed.). Boca Raton, FL: CRC Press. - see page 36	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		'victim and hospital information'.	
The Individual		-	
Adverse or ineffective parenting practices		*Parental:* Young mother (a teenager when the boy was born), father behaviour problems, parental substance use. Poor parental supervision, physical punishment by the mother, poor parent–boy communication. *Parental:* Poor relationship with parent, counter control (the bad behaviour of the boy inhibits parental attempts at socialisation)	Parents killed by their child(ren)
Antisocial attitudes		*Child behaviour:* Serious delinquency (based on self, parent or teacher reporting), covert behaviour (concealing, manipulative, untrustworthy), physical aggression, nonphysical aggression, cruel to people, chronic runaway, disruptive behaviour disorder diagnosis (according to the Revised Diagnostic Interview Schedule for Children: Costello, Edelbrock, Kalas, Kessler, & Klaric, 1982), high (above-average) screening risk score	Juvenile believes that they are more experienced, knowledgeable of the world than their age portrays and gets involved with a gang, eventually becoming both an offender in gang-crime and then a victim of "gang warfare"
Attempted suicide previously		Orthmann, C. H., & Hess, K. M. (2013).	The victim suffered with

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Criminal investigation (10th ed.). Clifton Park, NY: Delmar. See page 266 ('Suicide').	clinical depression and was high risk in terms of who they associated with. Seven days prior to their homicide police were called to their residence due to an attempted suicide. This victim's vulnerability and susceptibility to external influences lead to their death.
Behavioural risk factors		Conduct and behavioural problems (Delisi et al., 2011; Farrington, 2003; Loeber et al., 1998, 2005, 2008) as juveniles, leave their parents' household due to on-going friction	Victim's behaviour causes them to be excluded from their original community, so that they end up 'living rough' and are subsequently found drugged, beaten and abandoned in a 'squat'. Case ID: UH019-19SHV1 (8297318)
Biological factors		Victim is born with peripheral neurological functioning, has limited brain development (Raine, 1993) or is the victim of an accident	Victim lived in a government-run institution when his family gave him

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		and sustains significant head trauma	up as a child due to poor brain development and serious mental issues. Police believe that he was specifically targeted by the POI due to his disability, beaten and murdered due to his inability to clearly communicate. Case ID: UH003AQU
Compile a list of victim's acquaintances (ie: met whilst doing a hobby, known from work or travels to work with on public transport)?		-	
Consider contextual risk – poverty, itinerant living, geographic location of initial attack etc.		-	
Determine the victim's routine schedule, hobbies, habits – this could provide a possible intersection with the POI		Savino & Turvey (2011, p. 166): "Victiminological information that can be gained from social networking sites includes ... daily schedule or routine activities." Change in victim's routine: Orthmann, C. H., & Hess, K. M. (2013). *Criminal investigation* (10th ed.). Clifton Park, NY: Delmar. See page 278 - factors suggesting a change in the victim's routine.	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Create a linear timeline: detailing today, 24 hours prior and then a week and month previous?		Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see page 93 ('Creating a timeline: The last 24 hours').	
Customary mode of transport Bicycle Drives own vehicle Hitchhikes Public Transport Bus Train Ferry Relies on others, car pool Taxi Unknown Walks		-	
Date of Birth: and stated age (possibly different)		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 143 (determination of age'). *Age and homicide clearance:* Addington, 2006; Alderden & Lavery, 2007; Jiao, 2007; Lee, 2005; Litwin, 2004; Litwin & Xu, 2007;	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Mousoz & Muller, 2001; Puckett & Lundman, 2003; Regoeczi, Jarvis, & Riedel, 2008; Trussler, 2010.	
Date of Death:		-	
Determine the victim's gender male female transgender intersex unknown non-specific		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 143 ('determination of gender'). *Gender and homicide clearance:* Alderden & Lavery, 2007; Lee, 2005; Regoeczi et al., 2008; Trussler, 2010; Jiao, 2007; Litwin & Xu, 2007; Litwin, 2004; Mousoz & Muller, 2001; Puckett & Lundman, 2003.	Consider biological sex as opposed to identified gender
Did the incident indicate any cultural factors?		Owens, J. (2008). *Race, ethnicity, economic deprivation, and intimate partner homicide: Factors that influence differential victimization.* - See page 12 (cultural theories and homicide).	☐ Yes ☐ No If yes, details -
Did the victim use social media? (i.e. Facebook / Twitter etc)		DiBiase, T. A. (2015). *No-body homicide cases: A practical guide to investigating, prosecuting, and winning cases when the victim is missing.* Boca Raton, FL: CRC Press. - see page 8.	Review who looked for them on LinkedIn, FaceBook or Twitter etc. Had they complained of unwanted

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See p. 76 ('technological history').	attention, 'de-friended' someone or have open access to their accounts?
Did the victim drink alcohol? (historical / recent)		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See p. 74 ('Drug and alcohol history'). Darke, S., & Duflou, J. (2008). Toxicology and circumstances of death of homicide victims in New South Wales, Australia 1996-2005. *Journal of Forensic Sciences, 53,* 447-451. Dearden, J.,, & Payne, J. (2009). Alcohol and homicide in Australia. *Trends & Issues in Crime and Criminal Justice*. Canberra, Australia: Australian Institute of Criminology.. - looks at victims as well as offenders. Pridemore, W. A., & Eckhardt, K. (2008). A comparison of victim, offender, and event characteristics of alcohol- and non-alcohol-	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		related homicides. *Journal of Research in Crime and Delinquency, 45*, 227-255. Mousoz and Muller (2001)	
Did the victim ever smoke? (historical / recent)		Davidson, M. R. (2012). *A nurse's guide to women's mental health*. New York, NY: Springer. See page 45 'behavioral consequences of intimate partner violence.'	
Did the victim have a speech impediment, an accent or a lisp?			
Did the victim normally wear jewellery in relation to their marriage or partnership? If so, is it still present? Had they removed it previous to death?		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 140 ('jewellery').	
Did the victim speak any other language, other than English?		If yes, which one(s) 1. 2. 3.	Where did they learn the language? Was it a native language?
Did this victim belong to a 'micro socio-demographic community'			Did the victim live in and belong to a community who shared similar education and income

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			levels, marital status, occupation, religion, birth or death rate, average size of family or average age at marriage etc.?
Digital footprint – cookies, cache, favourites, bookmark, history		Casey, E. (2010). *Handbook of digital forensics and investigation*. - See Chapter 5 (partic page 279 'windows internet and communications activities' onwards).	
Did the victim take illicit drugs (includes inhalants), did they ever?		See other illicit drugs section (next to the alcohol section)	
Does this victim have identification present on them or within the vicinity of the initial assault?		Fisher, B. A., & Fisher, D. R. (2003). *Techniques of crime scene investigation* (7th ed.). Boca Raton, FL: CRC Press. See pages 146-147 (bottom paragraph starting with 'If any identifying documents such as a passport, visiting card, identification card...")	
Drug involvement – buying, selling, taking or protecting		Drug selling, illicit drug use (Heide 1999), prescriptive drug addiction	Victim tried to steal a large sum of money from a drug dealer whilst selling on stolen drugs from a previous theft. He attacked the dealer, who

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			overpowered the victim, beat him and then set him on fire. Case ID: SH (15407301)
What was the victim's ethnicity? (ASCCEG 2011) ☐ Oceanic ☐ North-West European ☐ Southern and Eastern European ☐ North African and Middle Eastern ☐ South-East Asian ☐ North-East Asian ☐ Southern and Central Asian ☐ People of the Americas ☐ Sub-Saharan African ☐ Australian ☐ Australian Aboriginal ☐ Australian South Sea Islander ☐ Torres Strait Islander ☐ Unknown		Victim race and homicide clearance: Addington, 2006; Alderden & Levery, 2007; Jiao, 2007; Lee, 2005; Litwin, 2004; Litwin & Xu, 2007; Mouzos & Muller, 2001; Puckett & Lundman, 2003; Regoeczi, Kennedy, & Silverman, 2000; Xu, 2008. Victim ethnicity and the investigation: See Becker, R. F., & Dutelle, A. W. (2013). *Criminal investigation* (4th ed.). Burlington, MA: Jones & Bartlett Learning. - page 261. Identifying the deceased.	
Has the victim used 'dating' sites on the internet?		Potentially Wykes, M. (2010). *Harm, suicide and homicide in cyberspace: Assessing causality and control* (book).	
Search and record internet bookmarks, cache, search history, note preferences, properties and posts		Casey, E. (2010). *Handbook of digital forensics and investigation*. - See Chapter 5 (partic page 279 'windows internet and communications	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		activities' onwards).	
Has this victim recently, within the last 12 months, rejected someone's advances or did they abandon a relationship?			
Identify marks, tattoos, features, scars – how old are they?		See Becker, R. F., & Dutelle, A. W. (2013). *Criminal investigation* (4th ed.). Burlington, MA: Jones & Bartlett Learning. - page 261. Identifying the deceased. Mentions how physical features like this might assist in identifying the deceased.	Marks – Tattoos – Features – Scars –
If the victim belonged to a specific faith or religious group what were their beliefs, practices or traditions		"When a killing appears to have a ritualized quality without a sexualized aspect, religion motive needs to be considered. Weapons need not be of religious significance. However, weapon choice is an important weapon consideration, to the end that part of a religious ritual may mandate a specific weapon. Use of uncommon weapons, such as swords, warrant special consideration as to their relationship to religious symbolism. The investigator must be careful not to confuse a hate crime with a crime in the	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		name of religion, although both may be present. When the crime scene is of spiritual significance, the crime is more likely a hate crime targeting the religion represented there" - Douglas, Burgess, Burgess, & Ressler (2013). Page numbers not present.	
If the victim is a child, are they in the care of a step-parent or a de-facto partner?		Crime and Misconduct Commission. (2013). Vulnerable victims: Child homicides by parents. *Research and Issues, 10,* 1-22. - do a find search for 'step'. Articles from child homicide review	
Is 'class' an issue for this victim?			
Level of Education ☐ No formal education ☐ Home educated ☐ Primary School ☐ High School ☐ Certificate I ☐ Certificate II ☐ Certificate III ☐ Certificate IV ☐ Diploma ☐ Advanced Diploma		Owens, J. (2008). *Race, ethnicity, economic deprivation, and intimate partner homicide: Factors that influence differential victimization.* - see page 38 (victim educational level). Pridemore, W. A., & Shkolnkov, V. M. (2004). Education and marriage as protective factors against homicide mortality: methodological and substantive findings from Moscow. *Journal of Quantitative*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
☐ Bachelor Degree ☐ Graduate Certificate ☐ Graduate Diploma ☐ Masters Degree ☐ Doctoral Degree		*Criminology.* Books that state that investigators should find out the victims educational level: Hazelwood & Burgess (2014), and Savino and Turvey (2011).	
Marital Status ☐ Never married ☐ Widowed ☐ Divorced ☐ Separated ☐ Married in a registered marriage ☐ Married in a de-facto marriage ☐ Betrothed/Promised70 If the victim was in a relationship at the time of their death was there significant partner away (was the victim left alone to cope, therefore changing their daily behaviour, travel, timing etc.)		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See pp. 74-75 ('relationship history').	
New Born – was the victim born within a month of the incident?		Bryant & Cussen (2015), Yarwood (2004), and Strang (1996) - for children <1 year in Aus and overseas De Bortoli, L., Coles, J., & Dolan, M. (2013).	

[70] into marriage (cross culturally this is much more significant than engaged) and identifies that the couple are fully committed.

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		A review of maternal neonaticide: A need for further research supporting evidence-based prevention in Australia. *Child Abuse Review.* Porter & Gavin (2010). Infanticide and neonaticide: A review of 40 years of research evidence on incidence and causes. *Trauma, Violence, & Abuse.*	
Noticeable odours: does your victim smell like any of the following and is that out of context? (that is they smell like cigarettes but don't smoke) aftershave bad breath vomit urine foul smelling body odour sweat alcohol petrol tobacco		Gerritsen, R. & Haak, R. (2015). *K9 scent training: A manual for training you identification, tracking and detection dog.* - see p. vii onwards (starting from last para on page vii):	
Perinatal Risk		Perinatal relates to the period approximately five months prior to giving birth and one month post birth. Extant research shows that childbearing at an early age is strongly	The infant victim, in this case, was born to a very young mother who came from a poor, under-

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		associated with infant homicide, particularly if the mother had given birth previously (Farrington, 2003; Loeber, Farrington, Stouthamer-Loeber, & White, 2008; Nagin, Pogarsky, & Farrington, 1997; Simons, Johnson, Conger, & Elder, 1998; Shumaker & McGee, 2001).	educated and alcohol-affected family herself. Due to the mother's problems, both physical and emotional, and her inability to cope, she abused, mistreated and ignored her infant until its death at just a few weeks of age. Case ID: SH029-SV1
Political stance		The phenomenon of political violence is by no means new; nor have the measures taken by western governments in response to that violence. Political violence has been used to achieve political and social objectives throughout the ages. Western governments have always responded with tough "law and order" measures, and have been routinely criticised for undermining citizens' civil liberties. The different dimensions to the complex issue of political violence, including the justifiability of using or advocating violence as a political strategy, the alleged threat of violence, and the effects of violence	The victim in this event was shot twice and killed. The offender was a political rival and in direct opposition to the victim; when he lost in the polls he killed his opponent. It took police nearly seven years to solve this crime.

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		on individuals (Sears & McConahay, 1973; Soriel, 2010).	
Previous name or alias?		"...many individuals will use their own first name or initials in selecting an alias." (Osterburg & Ward, 2015, p, 587)	
Protecting illegal marketplace and urban illicit economy		Victims are reluctant to invoke police assistance to resolve disputes and often rely on violence as a means of regulation. Due to these dynamics, participation in property or drug markets is perhaps an important predictor of committing lethal violence (Rosenfeld, 2009)	There were numerous victims within the COPS dataset that fit this particular solvability factor. Drugs, prostitution, firearms and rare animals such as abalone are included in the illegal market place
Relevant Antecedents - Known Factors - Perspective of community, family, significant other.			
Relevant Antecedents - Known Factors - Police perspective			
Residential History (via RPData) Did they share housing Board Own Rent Other: Explain		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See p. 75 ('residential history'). .	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Victim sexual preferences (select ALL that apply) Asexual (a person who has no sexual desire) Bestiality (sexual stimulation between a person and an animal) Bisexual Bondage practitioner Celibate (a person who abstains from sexual relations) Exhibitionist (a person who behaves in an extravagant way in order to attract attention – may or may not be sexual) Group sex Heterosexual Homosexual Masochist (a person who obtains pleasure from receiving punishment) Necrophile (sexually stimulated by a deceased person) Other (describe) Paedophile (sexually attracted to children) Sadist Transgender (a person who self identifies as a woman, a man, neither or both that is not matching with their assigned sex (identification		Bell, M. D., & Vila, R. I. (1996). Homicide in homosexual victims. *American Journal of Forensic Medicine & Pathology, 17,* 65-69. Tomsen, S. (2002). Hatred, murder and male honour: Anti-homosexual homicides in New South Wales, 1980-2000. *PsycEXTRA - Report, 43,* 118. Gojanovic, M. D. (1998). Homosexual homicides. *Forensic and Legal Medicine, 5,* 191-194. Saffin, L. A. (2015). *Identities under siege: Violence against transpersons of colour* - in Stanley and Smith's book '*Captive genders: Transembodiment and the prison industrial complex*' - note that although this chapter focuses on transsexual people of colour - it also contains some info on trans people in general and the LGBTQ community (and homicide, obv.). . Mouzos, J., & Thompson, S. (2000). *Gay-hate related homicides: An overview of major findings*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
by others based on physical sex). Transgender is independent of sexual orientation) Transsexual (these people identify as a member of the sex opposite to that assigned at birth) Transvestite Unknown (tick this box if there is evidence of sexual deviancy but this evidence does not lead you to one of the categories listed here) Voyeur (a person who gains sexual stimulation from observing sexual activity on the part of others)		*in New South Wales.*	
Victim's lifestyle – sample queries to consider: Type of house Suburb in which they resided Clothing Entertainment choices Vehicle choice Did they travel overseas What type of sport did they play		☐ Type of house – duplex, apartment, granny flat, brand new residence, villa, etc. ☐ Suburb in which they resided – socio-economic situation, ethnic makeup of suburb, how long have they resided there? ☐ Clothing – branded, new, well kept, second hand, expensive? ☐ Entertainment choices – out and about, very social, stay at home, screen based? ☐ Vehicle choice – does choice fit need? Is	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		it affordable? How is it kept? What is it used for (business, pleasure, loaned out, Uber)? ☐ Did they travel overseas – where, when, for how long, reason for trip? ☐ What type of sport did they play – team sport? Individual sport?, how long had they played for, were they competitive, successful?	
Victim's personal history – for example: Where have they been in the last five years? Were they born in Australia? Were they married before? – to whom, where, when (date of marriage), how long were they married for? Reason for end of marriage? Have they been incarcerated?			
Victim's sexual exposure, consider slightly different from sexual history, in terms of previous partners. This answer should include victim's preferences and proclivities.			
Victim's social habits – for example: Regular attendance at a club or public house Regular church attendance Participation in a team sport, training or games			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Other regular outings: such as shopping, children's sports or scouts			
Victim-offender relationship (if known)		Victim-offender relationship and homicide clearance: Jiao (2007); Lee (2005); Xu (2008) Types of victim-offender relationships & trends in victim-offender relationships in Aus, etc: Graycar, A., & Grabosky, P. (2002). *The Cambridge handbook of Australian criminology*. - see page 191 (and rest of chapter - titled 'Homicide'). . Recent Aus data on victim-offender relationships: Bryant & Cussen (2015). *Homicide in Australia: 2010-11 to 2011-12: National Homicide Monitoring Program report* - see page 7.	
Violent criminal behaviour earlier in life and committed many other illegal activities		Early violent behaviour increases an individual's risk for committing homicide and may reflect a general tendency for rule-breaking (Delisi et al., 2011; Loeber & Leblanc, 1990) (Cook & Laub, 1998	Juvenile runaway victim with previous charges for theft, break, enter and steal, drug usage and prostitution – this victim died prior to their 17th birthday. Case ID: SH022-22SHV1
Vulnerability		NSW Courts (Criminal Procedure Act	There were hundreds of

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		1986 chapter 6 part 6) define a vulnerable person as a person who has suffered a personal assault offence and is one of the following **1.** a child, *or* **2.** a cognitively impaired person. This includes: ▪ an intellectual disability ▪ a developmental disorder (including an autistic spectrum disorder) ▪ a neurological disorder ▪ dementia ▪ a severe mental illness ▪ a brain injury. The NSW Police Force definition makes special arrangements for vulnerable persons - particularly when they need to give a statement. In Law Enforcement (Powers and Responsibilities) Regulation 2005 Clause 24, a person who falls within one or more of the following categories is a "vulnerable person":	victims within the COPS dataset that fit in this category. The reason that this solvability factor needs to be recorded is that it frequently was not – in terms of how the victim was identified. Suggestion is that a field be added to COPS with a drop-down list to categorise the background of the victim

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		(a) children (b) people who have impaired intellectual functioning (c) people who have impaired physical functioning (d) people who are Aboriginal or Torres Strait Islanders (e) people who are of non-English speaking background Crime and Misconduct Commission. (2013). Vulnerable victims: Homicides of older people. *Research and Issues, 12,* 1-20.	
Was the victim a member of any group, gang or affiliation such as Returned Serviceman's League (RSL), Outlaw Motorcycle Gang (CMG), or Sports Clubs or employment; such as Australian Defence Force member (ADF), Police officers, other emergency service		Investigating gang-related homicides: Watkins, D., & Ashby, R. (2007). *Gang investigations: A street cop's guide*.- See pages 18 & 19 ('Investigating Gang Murders'). . Gang-related homicide clearance: Alderden and Lavery (2007), Lee (2005) Aus gang homicide info: Mouzos, J. (2000). *Homicidal encounters: A study of homicide in*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Australia 1989-1999 - see pp 25-26.	
Was the victim found in a different place than where they were initially assaulted?		Osterburg, J. W., & Ward, R. H. (2015). *Criminal investigation: A method for reconstructing the past* (7th ed.). Abingdon, UK: Routledge. - See page 391 'Circumstances and Where Found'	If yes, what evidence do you have to prove it?
Was this incident or victim, linked to criminal entities (i.e. CMG, Crime Syndicates?			Was this incident or victim, linked to criminal entities (i.e. CMG, Crime Syndicate) ☐ Yes ☐ No ☐ Unsure If yes, details[71] –
Was this incident related to the victim's ethic/cultural background? (Ethnicity = bloodline, ancestry; Culture = the way the victim lived their lives, groups the individual belonged to, the norms and processes that are shared etc.)			☐ Yes ☐ No If yes, details -
Was this incident victim-precipitated (ie: did the victim's action lead to their current			☐ Yes

[71] For example: a person is killed and has travelled to Middle East in last six months – leading to the link that he was targeted because of his activities in the Middle East and more specifically linked to the elections and loading up votes.

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
victimisation)?			☐ No If yes, details -
Was this victim an immigrant to Australia?		Kliewer, E. V. (1994). Homicide victims among Australian immigrants. *Australian Journal of Public Health, 18,* 304-309. Miller, J. M. (2009). *21st century criminology: A reference handbook*. Page 180 'Violent Crime Victimization' (under the larger heading 'Victimization Experienced by Immigrants'.	If yes – where did they come from and when?
Was this victim physically, mentally or emotionally isolated from their family, friends or work colleagues?			
Social competence		See Phillips, J. (2014). *Domestic, family and sexual violence in Australia: An overview of the issues*. Retrieved from http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1415/ViolenceAust#_ftn160 - Says that children exposed to domestic and family violence tend to be less socially competent. Also see Australian Institute of Health and Welfare. (2015). *Child abuse and neglect*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Retrieved from http://www.aihw.gov.au/child-health/safety-and-security/ Says that victims of abuse and neglect may experience lower social competence.	
Cultural values		Has the victim's cultural values made them a target of violence?	
Abortion		Did the victim ever have an abortion, is it recorded in their medical history? Did anyone other than the victim and the medical specialist know – could this made the victim a target?	
Adopted			
Financial problems		Where there complaints from debtors? ATO records? ACCC records?	
Prior victimisation (physical)		Check police and medical records? Witness statements?	
Deviance – behaviour recognised as violating expected rules and norms. Departs significantly from social expectations and norms		What type is evident: criminal? Social? Sexual?	
Swipe card access or Lanyard		Does the victim have a lanyard or swipe	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		card and what does it access? What is the level of security? Why do they have it? How long have they had it?	
VIP clubs – store cards (where contact details are collected for the benefit of collecting discounts		Address and private details kept on record – these could have been accessed by the Person of Interest.	
Injuries			
What are Causes of Death (COD)?		Victim cause of death and homicide clearance: Addington, 2006; Alderden & Lavery, 2007; Mouzos & Muller, 2001; Puckett & Lundman, 2003; Trussler, 2010; Wellford & Cronin, 1999 Bryant & Cussen (2015)	could victim have produced injury to bring about death?
Were the medical examiners account of the victim's injuries consistent with the crime scene examiners account?			☐ Yes ☐ No If yes, details -
Are there signs of defensive wounds on this victim?		See Prahlow, J. A. (2010). *Forensic pathology for police, death investigators, attorneys, and forensic scientists*... See page 391 'section titled defensive wounds'. Also see Payne-James, Busuttil, & Smock	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		(2003). *Forensic medicine: Clinical and pathological perspectives*. London, UK: Greenwich Medical Media Ltd. See chapter on sharp force trauma (page 307 onwards).	
Could the weapon at the scene have caused the fatal injury?			
Do the injuries fit the crime?			
Are the wounds to the victim consistent with the story presented? i.e. In an alleged suicide, could the victim have shot themself?		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 381 (section labelled 'suicide'). . Orthmann, C. H., & Hess, K. M. (2013). *Criminal investigation* (10th ed.). Clifton Park, NY: Delmar. See page 266 ('Suicide'). .	is the hammer down on an empty casing? And is it the right casing? is the rotation of the cylinder consistent with the way the shots were fired? whether the firearm found at the scene is defective or not? Is it capable of chambering and firing rounds?
Weapon Used ☐ Yes ☐ No If yes, what type of weapon: ☐ Firearm ☐ Sharps		A number of victims carried weapons for their own protection; however, they were seen to either induce violence towards them or be used against them in the commission	The victim in this case was known to carry knives to work and kept a knife behind the electric stove in

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
☐ Drowning ☐ Explosives ☐ Blunt objects ☐ Asphyxiation ☐ Fire ☐ Bio-chemical ☐ Poison ☐ Narcotic ☐ Assaultive Force72 ☐ Fall from height ☐ Other Explain73:		of the offence (Felson & Steadman, 1983) *Location of weapon:* Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press. - see page 385. . Weapon used and homicide clearance: See homicide clearance lit review.	the kitchen to protect himself. He was known to carry large amounts of cash and small amounts of cannabis for personal use. He regularly used the services of prostitutes both in brothels and in his residence. His level of risk was medium to high based on the fact that he was killed with his own knife. Case ID: UH008EME
In the case of a firearm related homicide: Does the blood on the victim match the wound and trajectory? Look for blood spatters from the entry wound on hands, clothes, weapons etc. Are there 'defence' wounds present?		Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. See page 224. Also see bloodstain chapter.	
Medical		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime,*	

[72] hands and feet

[73] For example: some survivors of torture and trauma will have had injuries from electrocution, from cattle prods, internal burning on them prior to the homicide event.

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		criminals, and victims.. Waltham, MA: Anderson Publishing. - See p. 73 ('medical history'). . Orthmann, C. H., & Hess, K. M. (2013). *Criminal investigation* (10th ed.). Clifton Park, NY: Delmar. See page 271 ('The Homicide Victim'). : Relevant to a few points below. Excerpt: "Interview personal contacts such as doctors, pastors or counsellors to learn about the victim's physical and emotional condition, especially if it has not yet been determined whether the death was an accident, suicide or homicide. The person's medical background may provide information about an extremely painful or terminal disease that could motivate suicide..." etc.	
Did the victim ever see a psychologist or psychiatrist		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See p. 73 ('psychological history'). .	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Did the victim ever undergo IVF or any other infertility treatment		-	
Did the victim have outstanding physical features? (eg. Crossed eyes, noticeable limp, physical deformity, distinctive hairstyle, etc.)		-	
Did the victim normally wear prescriptive reading glasses, sunglasses or contact lenses? In relation to contact lenses where they coloured (altering the natural colour of the eyes)		Fisher, B. A., & Fisher, D. R. (2012). *Techniques of crime scene investigation* (8th ed.). Boca Raton, FL: CRC Press.- see page 140 ('eyeglasses'). .	
Did the victim suffer with any form of disability?		Crime and Misconduct Commission (2013). Vulnerable victims: homicide of older people. *Research and Issues, 12,* 1-20. - see page 3 'physical disabilities and impairment' Strauss, D., Shavelle, R., Anderson, T. W., & Baumeister, A. (1998). *External causes of death among persons with developmental disability: The effect of residential placement.* American Journal of Epidemiology, 147, 855-862 - looks at the risk of homicide for people with developmental disabilities vs. the gen pop. Also looks at their risk in different types of residential settings (e.g., semi-independent	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		living vs. institutions)	
Does this victim suffer with a biological or hereditary issue?		-	
Had this victim been admitted to hospital in the past 12 months?			
Has the victim suffered with any episodes of mental illness		Hiroeh, Appleby, Mortensen, and Dunn (2001) research found that people suffering with mental disorders, including severe mental illness, were at a substantially increased risk of becoming a victim of homicide. Strategies to reduce mortality in the mentally ill are right to emphasise the high risk of these people dying at the hands of others Rodway, C., Flynn, S., While, D., Rahman, M. S., Kapur, N., Appleby, L., & Shaw, J. (2014). Patients with mental illness as victims of homicide: A national consecutive case series. *The Lancet Psychiatry, 1*(2), 129-134. - found that people "...with mental illness were more likely to die by homicide than people in the general population" Crump, C., Sundquist, K., Winkleby, M. A., & Sundquist, J. (2013). Mental disorders and	The victim in this case was a schizophrenic male who lived alone but had daily contact with a parent who lived locally. The POI in this case hated 'retards' and killed this man in a moment of alcohol fuelled rage. Case ID: SH001-SV1

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		vulnerability to homicidal death: Swedish nationwide cohort study. BMJ. Retrieved from http://www.bmj.com/content/346/bmj.f5557.full.pdf+html	
Height Weight Any anomalies? (e.g.: was this victim under-weight for their height?)		Becker, R. F., & Dutelle, A. W. (2013). *Criminal investigation* (4th ed.). Burlington, MA: Jones & Bartlett Learning. - page 261. Identifying the deceased.	
What is the victim's build: Small (thin) Medium (average) Large (stocky) Obese Unknown (were only skeletal remains are discovered)		-	
Does the victim's medications compare with toxicology results?		Alcohol and drugs:: See Karch, S. B. (2007). *Postmortem toxicology of abused drugs* - See page 4 onwards (role of toxicology in death investigations). .	
Was the victim intoxicated with alcohol at the time of their death? ☐ Yes ☐ No If yes, details – time, amount, location etc.		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See p. 74 ('Drug and	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		alcohol history'). . Darke, S., & Duflou, J. (2008). Toxicology and circumstances of death of homicide victims in New South Wales, Australia 1996-2005. *Journal of Forensic Sciences, 53,* 447-451. Dearden, J.,, & Payne, J. (2009). Alcohol and homicide in Australia. *Trends & Issues in Crime and Criminal Justice*. Canberra, Australia: Australian Institute of Criminology.. - looks at victims as well as offenders. Pridemore, W. A., & Eckhardt, K. (2008). A comparison of victim, offender, and event characteristics of alcohol- and non-alcohol-related homicides. *Journal of Research in Crime and Delinquency, 45,* 227-255. Mousoz and Muller (2001)	
Was the victim intoxicated with illicit drugs at the time of their death? (includes inhallents) ☐ Yes ☐ No Drug Type: _____		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See p. 74 ('Drug and alcohol history'). . Darke, S., & Duflou, J. (2008). Toxicology	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		and circumstances of death of homicide victims in New South Wales, Australia 1996-2005. *Journal of Forensic Sciences, 53,* 447-451. Mouzos and Muller (2001)	
Was the victim intoxicated with prescription drugs at the time of their death? ☐ Yes ☐ No Drug Type: _____		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See p. 74 ('Drug and alcohol history'). . Darke, S., & Duflou, J. (2008). Toxicology and circumstances of death of homicide victims in New South Wales, Australia 1996-2005. *Journal of Forensic Sciences, 53,* 447-451.	
Employment		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.* Waltham, MA: Anderson Publishing. - See p. 75 ('employment history'). . *Employment and homicide clearance:* Mouzos and Muller (2001) found that solved homicides were significantly more likely than unsolved homicides to involve victims not in the labour force (74.18% vs. 63.95%),	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Did the victim have a Curriculum Vitae (CV)? If so, check their employment, finances and residential history – does it all fit?		As above.	
Employment Status[74] ☐ Yes ☐ Unemployed ☐ Aged pensioner ☐ Shift worker ☐ Part-time ☐ No – infant/child ☐ Student[75] ☐ Casual ☐ Disabled ☐ Seasonal		How did the victim earn money? Were they gainfully employed or on a social security pension. If employed what did they do? Predictability – shift schedule re work Co-workers and daily contacts (coffee shop, lunch stall, gym, parking attendant) As above	
Has this victim ever been employed in law enforcement?			
Has this victim ever been employed in the Emergency Services?			

[74] From ABS Catalogue No. 1220.0

[75] University, college – over 18 years old

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Has this victim ever served in the military?		Becker, R. F., & Dutelle, A. W. (2013). *Criminal investigation* (4th ed.). Burlington, MA: Jones & Bartlett Learning. - page 261. Identifying the deceased. Mentions how victims from the military should have their fingerprints on record.	
Has this victim ever worked in the 'sex industry'?		Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see Chapter 5: Victim Lifestyle Exposure. .	
Was this victim ever employed as a police officer, emergency service worker, sheriff, court worker, corrections or other associated with this industry?			
Was this victim in the military, Department of Attorney General or work for a clandestine agency where they held secret or top secret classifications?			
Legal			
Did the victim give witness testimony to police or court?			
Did the victim have a will?			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Did the victim hold any stocks, shares or trusts?			
Did this victim ever witness a crime that was reported to police			
Did this victim previously complain to police or someone else that they were being harassed, scared or being threatened?		Past victimisation – Tseloni and Pease (2003, p196) '...victim is a good, arguably the best readily available; predictor of future victimisation'. Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See p. 76 ('past victimization). . Walsh, A., & Hemmens, C. (2011). *Introduction to criminology: A text/reader* - see pp. 559 - paragraph above 'victimization in the workplace and school. .	
Does the victim have 'criminal history' and if so, record their antecedents (prior convictions) ☐ Yes ☐ No		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.* Waltham, MA: Anderson Publishing. - See p. 73 ('justice system history). . Victim prior criminal record and homicide	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		clearance: Alderden & Lavery, 2007; Jiao, 2007; Litwin, 2004; Litwin & Xu, 2007; Xu, 2008.	
Had this victim completed jury duty within the past two years?			
Has the victim ever had an ADVO taken out against someone else or themselves		Mouzos (2000). *Homicidal encounters: A study of homicide in Australia 1989–1999* - see bottom of page 21	
Has this victim been a victim of a break and enter in the past 12 months?		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.*. Waltham, MA: Anderson Publishing. - See p. 76 ('past victimization). .	
Has this victim been a victim of theft in the past 12 months?		As above.	
Has this victim ever reported as a victim of sexual assault?		As above.	
Has this victim made an emergency call previously?			
Police Incident Status ☐ Cleared ☐ Unsolved ☐ Unknown If unknown, explain		See lit review on homicide clearance	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Was there a life insurance policy in this victim's name		DiBiase, T. A. (2015). *No-body homicide cases: A practical guide to investigating, prosecuting, and winning cases when the victim is missing.* Boca Raton, FL: CRC Press. - see page 16. Google Books.	
Victim's Behaviour			
Is there evidence that the victim preformed 'precautionary' or 'contradictory' acts?		If you're looking for a good definition of precautionary acts, see page 657 in Chisum, W. J., & Turvey, B. E. (2011). *Crime reconstruction* (2nd ed.). Waltham, MA: Academic Press. Although this definition focuses on offenders, it could be used to develop a good victim one. Other than that, could only find info on offender precautionary acts.	This will need explanation
Does this victim have any significant behavioural traits of note?		*Violent/aggressive:* Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see page 224.	
Can you, as the investigator, spend time with the victims personal belongings in situ to understand what they valued			

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Did the victim hold extreme views?		Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see Chapter 5: Victim Lifestyle Exposure.	If so, what?
Did the victim recently change the way that they dressed, acted or presented		Such as a change in their: aftershave, perfume, hair style, body hair waxing (both male and female) or started using 'Hollywood' (double sided) tape?	
Did this victim ever show paranoid behaviour?		Fitzgerald, P. B., de Castella, A. R., Filia, K. M., Benitez, J., & Kulkami, J. (2005). Victimization of patients with schizophrenia and related disorders. *Australian and New Zealand Journal of Psychiatry, 39,* 169-174 - found that individuals with schizophrenia spectrum disorders were at an increased risk of victimization (both of the violent and non-violent type).	
How would peers, family, friend describe this victim's parenting style?		Could only find information on the parenting style used on the victim and offender. Nothing on how the victim parents.	
Intelligence quotient (IQ)		An intelligence quotient, or IQ, is a score	The victim had a very high

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		derived from one of several stardardised tests designed to assess intelligence. The term was originally coined by psychologist William Stern (Neisser, 1997). IQ scores have been shown to be associated with such factors as morbidity and mortality (Deary & Batty, 2007; Jokela, Batty, Deary, Gale, & Kivimaki, 2009) parental social status, (Neisser et al., 1996) and to a substantial degree, biological parental IQ	IQ, lived in a stable, long-term relationship and was creating business opportunities that would have seen large dividends in a few years. He was targeted by the POI due to his high IQ and the potential to take that into criminal enterprise; when the victim refused he was battered to death. Case ID: UH029-UV1
Interpersonal conflicts		Defining interpersonal conflict as a dynamic process that occurs between interdependent parties as they experience negative emotional reactions to perceived disagreements and interference with the attainment of their goals. The first dimension of the framework identifies three properties generally associated with conflict situations: disagreement, negative emotion, and interference. The framework's second dimension identifies two targets of interpersonal conflict encountered in	The victim in this case had been adversely involved with a number of Australian Federal Law Enforcement agencies including the Taxation Office. He also had associations with members of the criminal community and was involved in a number of private civil disputes as he constantly tried 'get rich quick' schemes

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		organisational settings: task and interpersonal relationship (Barki & Hartwick, 2004, p. 1)	to improve his situation, often outside of the law. He was shot once in the chest, dying almost immediately in outhouses of his property. Case ID: SH020-20SV1
Victim motive – even though much of the extant literature has been in regards to the offender's motive and motivation for committing a criminal act, much of the police data that was used to support this thesis found that of the adult victims there was critically important information relating to the victim's motive often missing from the reports. Motivation is what drove the victim's actions, at a deeper level, to 'want' to complete a certain action, or more commonly a longer lasting project or job.		**Bijleveld & Smit (2006)** ▪ Criminal contract killing; criminal drug related; criminal other; sexual; robbery; disputes inmates; disputes acquaintances, disputes strangers; other; psychotic; unknown **Douglas et al. (1992)** ▪ Criminal enterprise; personal cause; sexual; group cause every type of motivation is divided into subcategories **Holmes & De Burger (1988)** ▪ Visionary ▪ Homicides are committed in response to voices or visions that demand that a person or category of persons be destroyed ▪ Mission oriented	This homicide involved a victim and two offenders; police solved this matter by identifying the victim's motivation for being at the remote location (which became the crime scene) and the level of risk that the offenders were willing to take to proceed with their business. Case ID: SH014-14SV1

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		▪ Conscious goal of eliminating a particular group or category of people ▪ Hedonistic thrill seeking ▪ Derives pleasure directly from the murder event ▪ Comfort ▪ Instrumental homicides in meeting the killer's goal of pleasure, creating comfort, the good life ▪ Lust ▪ Sexual arousal and gratification are integral to the homicidal act ▪ Power-control oriented ▪ Derives profound satisfaction from the process of having complete control **Keppel & Walter (1999)** ▪ Power assertive ▪ Increasing aggression ensures control and power ▪ Power reassurance ▪ fantasy and reassurance ▪ Anger-retaliation ▪ Seeks revenge for anger towards another person by attacking a symbolic person	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		▪ Anger-excitation ▪ Engages in prolonged torture, exploitation, and/or mutilation **Levin & Fox (1996)** ▪ Revenge (individual, category specific or nonspecific); love; profit; terror **Schmidt et al. (2005)** ▪ Concealment of prior homicide; greed; domestic argument; revenge; family honor; jealousy; sexual motives; other **Tita & Griffiths (2005)** ▪ Gang; drug; felony; argument; familial/domestic **Turvey (2003)** ▪ Power reassurance or compensatory ▪ The offense is restorative of the offender's doubts about himself, his fear of personal inadequacy ▪ Power assertive or entitlement ▪ The offender wishes to appear to have absolutely no doubt about his own adequacy and masculinity, he may be	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		using his attacks as an expression of his own virility ▪ Anger retaliatory or displaced ▪ The offender is acting on the basis of cumulative real or imagined wrongs; the victim may be one of the people who did him wrong or may symbolise that person to the offender ▪ Sadistic or anger excitation ▪ Motivated by intense, individually varying fantasies that involve inflicting brutal levels of pain on the victim, solely for offender sexual pleasure ▪ Profit or material gain ▪ Motivation oriented toward material or personal gain Unpublished research by Parker (2014) investigates offender motivation by reviewing the victim's interaction with them, the crime scene and the level of risk that both take at the time of the crime. Victim's motivation is as important to know, in a case of acquaintance or stranger homicide as it is to know the offender's	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Evidence of Resistance		Victim resistance during an act of violence may lead to homicide. Interaction between the victim resisting and the offender's subsequent behaviour can alter what the offender had previously planned. For example, if the victim resists, the offender is forced to make a decision about what to do, whether to abandon the attack, maintain current behaviour or escalate their behaviour. Extant studies have found that how the offender perceives the victim, as either a significant person, a means to an end, or a depersonalised object, will affect whether the victim survives the offender's attacks (Fritzon & Ridgway, 2001)	This offender was a Category 2 serial rapist and upon coercing his alcohol-affected victim to his car, forcibly raped her. During a short struggle, the victim allegedly struck the offender, causing damage to his nose and cheek. In response, the offender struck the victim multiple times with his closed fist and then strangled her. It is believed that had the victim remained passive, as the previous victims had done, she may have survived this encounter
Retaliation in the context of vigilante groups or revenge culture		Victims retaliating against aggressors tend to gain the benefit of a deterrent effect against future exploitation through second-party punishment (Szymanska, 2011). Once a working relationship is damaged through an act of injustice, how do the victim and	The case chosen as an example is of a Lebanese national who had extensive criminal history involving violence. His death was directly related to a dispute

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		offender repair their relationship? What causes the victim to let go of the anger and resentment and then reconcile with the offender? Justice may be served one of three ways: (1) by the victim evening the score; (2) by the organisation punishing the offender; or (3) by the offender repenting (Tripp, Bies, & Aquino, 2007)	with a rival gang, following a previous assault by a member of this gang (and later discovered as the alleged shooter in the deceased's murder). Apparently there were more than a dozen witnesses to this crime but they were reluctant to talk to police due to concerns for their own personal safety
Complete a full Risk assessment		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.* Waltham, MA: Anderson Publishing. - See p. 77 ('risk assessment'). .	Explanation required
Sexual Paraphernalia Child pornography (Sexually explicit) Commercial pornography Detective magazines Home-made sexually explicit material Non-sex/non-nude child photos None Nude photos commercial		*Case study illustrating how a sexual incident (self-suffocation) can be mistaken for homicide*: Gerberth, V. J. (2010). *Sex-related homicide and death investigation: Practical and clinical perspectives* (2nd ed.). Boca Raton, FL: CRC Press. - See bottom of page 149 ('suffocation') might be a few other good ones in the	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Nude photos home made Other (describe) Paedophile organisations' material Pornography (commercial) Sexual devices Sexually explicit films (home-made) Sexually explicit photographs (home-made) Sexually explicit recording (home-made) Sexually explicit stories/writing Women's clothing in men's residence where no woman resides		chapter. Even if you don't use any - they're worth reading. Very interesting!	
Sexual preference		Despite commitments to both diversity and equality, western societies continue their painful struggle with culturally constructed notions of difference (Schlesinger, 2013). Gay, Lesbian, Bisexual and Transgendered persons are still considered as pariahs in some communities and are frequently victims of violence (Najman, Dunne, Purdie, Boyle, & Coxeter, 2005) See references in section 'victim sexual preference' on page 31-32.	The victim in this case died as a result of a serious beating due to his sexual orientation. The victim was working as a female sex worker in a major city when he was hired along with five other females to entertain a group of businessmen. When in a vulnerable position the businessman discovered that his consort was actually entirely male, he beat the victim to death

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
			in a fit of rage
Consider the concept of 'missingness' with this victim? Have they purposely disappeared?			
Victim behaviour One year prior to the incident One month prior to the incident Fortnight prior to the incident One week prior to the incident The day before the incident Were there any significant changes (positive or negative), did they confide in anyone?			
Victim participation in sequence of activities		-	
Victim reputation, that is – how are they viewed by others?		Kirby *(2000, p. 75):* "The ability of an investigator to discover that the victim has a terrible reputation may be the only thing that may set the defendant free. The ability to prove that the victim was a violent person may be the fact that proves self-defense was justified." - Chapter 5: Backgrounding the Participants in Advanced Forensic Criminal Defense Investigations by Ciolino and Castle. .	
What is their peer group?		See Mouzos, J. (2000). *Homicide between*	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		friends and acquaintances in Australia Available online.	
What is this victim's lifestyle risk?		Turvey, B. E., & Petherick, W. (2009). *Forensic victimology: Examining violent crime victims in investigative and legal contexts.* Burlington, MA: Academic Press - see Chapter 5: Victim Lifestyle Exposure. .	
What three words would the closest person to this victim use to describe them?		-	
What was this victim's level of income Was there a potential threat or harm from this victims employment?		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims.* Waltham, MA: Anderson Publishing. - See p. 75 ('financial history'). .	
Where there any other sources of income? Shares Stocks Superannuation Pension Illegal 'Wind Fall' – bulk tax payment, lotto win Bata Defence payment – such as Reservist		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. - See p. 75 ('financial history'). .	
Can you identify a lock for all keys found on or in the possession of your victim?		-	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
Does the victim have: Safety deposit box Personal 'treasure' box/chest Journal Safe Handbag		-	
Temporal and Geographical Aspects		See below (day of week, time of day, etc. section'	
Place of Birth		-	
Place of Death:		-	
Place of residence76 :		Falk (1990): Murder: An analysis of its forms, conditions, and causes. See page 38. Found that the victims of murder typically "live in those areas of the city and country which are also the principal areas of residence for their killers". Explains why too. . Fact that homicide rates are higher in certain locations: O'Kane, J. M. (2005). Wicked deeds: Murder in America. New	

76 (both primary, long term and most recent – this may be crucial in positioning the victim particularly if they are a refugee where place of Birth may have no relevance when place of residency has been different)

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Brunswick, NJ: Transaction Publishers. See chapter 4: Geography of Murder (starts at page 63). . For Aus data re location see Bryant & Cussen (2015)	
The day of the week, time of the day, the month, and year of each individual offence If there is a considerable gap between offending times, the exact number of days, weeks, months, or years should be recorded. If there is a shorter time period between some offences than others, attempts should be made to determine why this has happened. Do the victims in those cases have different characteristics to those in the rest of the series? Are they perhaps opportunistic versus targeted victims? Should the time period be significant (years as opposed to days or weeks), attempts need to be made to establish why that is the case and how it can still be established that the cases are linked. This will not always be possible but should other temporal or geographic patterns be established (such as the offenses occurring only during fishing season or holiday times), this may indicate that the offender is not a local to the area.		Not only should this basic information be obtained, but any local or seasonal activities should also be identified. What type of things occur in this region around the time of the crime? Is it hunting, fishing, or fruit-picking season? Is it a holiday time? Bryant & Cussen, (2015) - Temporal characteristics on page 8. Sisti, D., Rocchi, M. B. L., Maccio, A., & Preti, A. (2012). The epidemiology of homicide in Italy by season, day of the week and time of day. Medicine, Science and the Law, 52, 100-106. Tihonen, J., Rasanen, P., & Hakko, H. (1997). Seasonal variation in the occurrence of homicide in Finland. The American Journal of Psychiatry, 154, 1711-1714. Mohanty, M. K., Kumar, T. S. M., Mohanram, A., & Palimar, V. (2005).	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		Victims of homicidal deaths - an analysis of variables. Forensic and Legal Medicine, 12, 302-304. Rock, D. J., Judd, K., & Hallmayer, J. F. (2008). The seasonal relationship between assault and homicide in England and Wales. Injury-International Journal of the Care of the Injure, 39, 1047-1053. References in 'temporal characteristics of child homicide' article.	
Environmental Factors			
Exposure to risky neighbourhood environment		Low socioeconomic status (the Hollingshead measure), such as due to divorce, a large family on welfare living in a small house with an unemployed mother, living in a 'risky neighbourhood' (Loeber et al., 2008)	Victim was targeted by the POI due to his itinerant lifestyle, poverty and drug dependency. Case ID: UH011-11UV1
Extensive criminal history		The community and financial costs of criminal careers has previously tended to minimise the public costs associated with crime. Sexual assault, armed robbery, aggravated assault, and burglary are all crimes that have been co-committed with homicide in the past. In Australia in 2003,	The victim in this case had a very long and extensive criminal history and was killed as part of that lifestyle. Case ID: SH006-SHV1 (6331385)

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		the average cost per murder exceeded $17.25 million in terms of victim costs, criminal justice costs, lost POI productivity, and public willingness-to-pay costs (see Delisi & Scherer, 2006 for U.S. results; Mayhew, 2003).	
Family poverty		This variable is linked to both Merton's theory of Anomie or Strain and also the propinquity hypothesis. Anomie (or Strain) is an extension of the functionalist perspective on deviance. It views the origins of deviance to tensions created by the gap between cultural goals and the means people have available to achieve those goals. Linking to this theory, the propinquity effect is the tendency for people to form relationships with those whom they encounter often (Festinger, Schachter, Back, 1950).	In this case, the victim lived and died in a poverty-stricken regional area of NSW. Stronger males targeted him within his community as a means to bully him into stealing his pension payments. Case ID: SH012-12SV1
Miscellaneous			
Do witness statements conflict with forensic evidence?		Wagenaar (2000): "witness statements are nearly always about what the witness can remember. Nevertheless, memory is fallible. [One] cannot unquestioningly presume that	

Victim Specific Extralegal Solvability Factors(ELSF)	*Relevant*	*Extant Research Related to ELSF*	**Sample Case Illustration (if applicable)**
		witness statements are true"	
Does any of family deem the crime against this victim as suspicious or necessary (e.g. if it is 'honour' based it may be that is expected and not suspicious at all from family perspective)		***Honour-based crime:*** Roberts, K. A., Campbell, G., & Lloyd, G. (2014). *Honor-based violence: Policing and prevention*. Boca Raton, FL: CRC Press. See chapter titled 'Effective investigation of honour-based violence 2.'	
Does one alleged co-victim report going to get help while the other victims were killed or harmed?		Petherick, W. (2015). *Applied crime analysis: A social science approach to understanding crime, criminals, and victims..* Waltham, MA: Anderson Publishing. See pp. 97-98 'staged burglary/ homicides.	
Has the alibi of any and all parties been investigated critically and thoroughly?		Osterburg, J. W., & Ward, R. H. (2015). *Criminal investigation: A method for reconstructing the past* (7th ed.). Abingdon, UK: Routledge. See 'Contrived alibi' (pp. 417-418). . Casey, E. (2010). *Handbook of digital forensics and investigation*. See page 28 'assessing alibis and statements'. .	Is there a possibility that it was fabricated?